TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

April 11, 1980

31/16/0224
(pnts 01 → 05)

Mr. Robert B. Wellman, Vice President
Cargill, Incorporated
P. O. Box 9300
Minneapolis, Minnesota 55440

Dear Mr. Wellman:

Enclosed are Permit Numbers AC 16-26082, AC 16-26083, AC 16-26084, AC 16-26085 and AC 16-26086, dated April 10, 1980, to Cargill, Incorporated issued pursuant to Section 403, Florida Statutes.

Should you object to this permit, including any and all of the conditions contained therein, you may file an appropriate petition for administrative hearing. This petition must be filed within fourteen (14) days of the receipt of this letter. Further, the petition must conform to the requirements of Section 28-5.15, Florida Administrative Code, (see reverse side of this letter). The petition must be filed with the Office of General Counsel, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301.

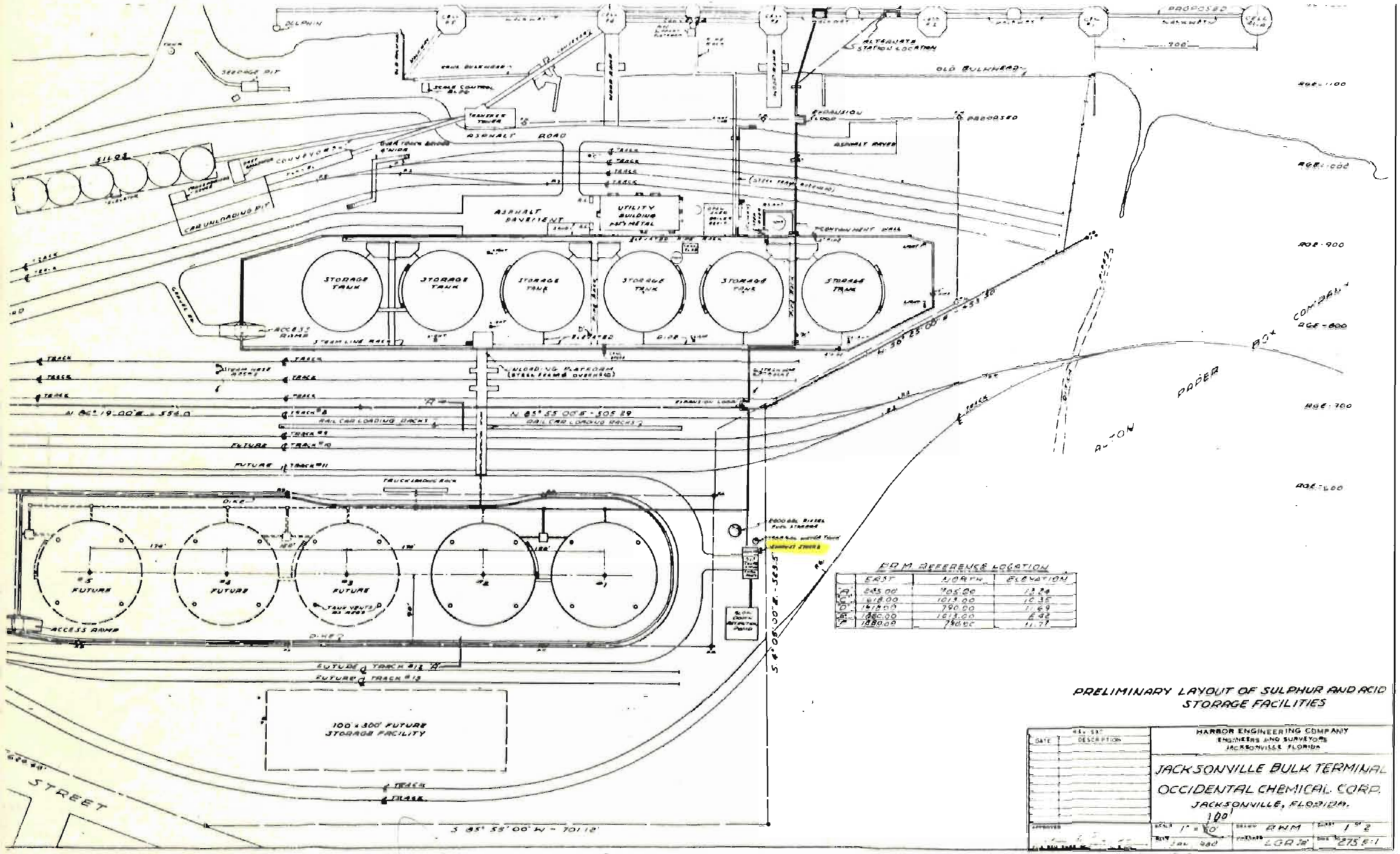
If no petition is filed within the prescribed time, you will be deemed to have accepted this permit and waived your right to request an administrative hearing on this matter.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement action for violation of the conditions and requirements thereof.

Sincerely,

Steve Smallwood, Chief
Bureau of Air Quality Management

Enclosure



FDM REFERENCE LOCATION

	EAST	NORTH	ELEVATION
	845.00	905.00	13.24
	918.00	1019.00	10.35
	1418.00	790.00	7.69
	1366.00	1013.00	8.42
	1880.00	790.00	11.77

PRELIMINARY LAYOUT OF SULPHUR AND ACID STORAGE FACILITIES

DATE	DESCRIPTION

HARBOR ENGINEERING COMPANY
ENGINEERS AND SURVEYORS
JACKSONVILLE FLORIDA

JACKSONVILLE BULK TERMINAL
OCCIDENTAL CHEMICAL CORP.
JACKSONVILLE, FLORIDA

APPROVED	SCALE 1" = 100'	DESIGN AWM	SHEET 1 OF 2
	DATE Jan. 1980	DRAWN LGR Jr.	JOB NO. 275.5:1

Attachment 4

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

CONSTRUCTION
PERMIT

PNT # 05

NO. AC-26082

CARGILL INCORPORATED
FEED MIXING SYSTEM

DATE OF ISSUANCE

10TH APRIL 1980

Jacob D. Varn

JACOB D. VARN
SECRETARY

DATE OF EXPIRATION

JULY 31, 1981

DER FORM PERM 11-42

Final Determination

Cargill, Incorporated
Feedmill

Jacksonville, Florida

Construction Permit

Application Numbers:

AC 16-26082
AC 16-26083
AC 16-26084
AC 16-26085
AC 16-26086

Florida Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

April 7, 1980

Cargill Incorporated Feedmill Construction Permit Final Determination

Cargill's Construction Application for a feedmill facility in Jacksonville, Florida has been reviewed by the Bureau. Public notice of the Department's Intent to Issue was published in the Florida Times Union on March 7, 1980. Copies of the preliminary determination were available for public inspection at the Duval County Bio-Environmental Services Division, the St. Johns River Subdistrict Office, and the Bureau of Air Quality Management.

No comments were received as a result of the Public Comment period.

The final action by the Department should be to issue the permits. All attachments noted in the permits have previously been distributed.

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

PERMIT/CERTIFICATION
NO. AC 16-26082

COUNTY: Duval

PROJECT: Feed Mixing System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 & 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the construction of a feed mixing system at a new feedmill. Particulate emissions are to be controlled by Flex Kleen Model 84 BVS-16 bag filter. The project is located at the Cargill Incorporated Feedmill near Whitehouse. The universal transverse mercator and latitude, longitude coordinates are: UTM Zone 17, 416.7E 3353.3N and 30°18'20"N by 81°52'30"W, respectively.

Construction shall be in accordance with the attached permit application and attached plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. "Application to Construct Air Pollution Sources", DER form 17-2.122(16).

2. Rerun of CRSTER modelling from Sholtes & Koogler, December 19, 1979.

3. Additional Information from Younglove Construction, January 10, 1980.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed

PERMIT NO.: AC 16-26082
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 16-26082
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

Specific Conditions

1. The maximum allowable particulate emissions shall be 0.053 pounds per hour and 0.075 tons per year from the bag filter emission point. No visible emissions shall be emitted from this point.

2. Operation shall be limited to 2,823 hours per year.

3. The maximum allowable raw material input shall be 120,000 pounds per hour of poultry feed.

4. During the construction phase quarterly reports on construction progress, commencing three months after initiation of construction, shall be submitted to the Bureau of Air Quality Management. The operating permit shall require maintenance of records indicating operation hours and raw material input to the system and shall be submitted annually in accordance with 17-4.14 FAC.

5. Emission tests for visible emissions shall be conducted for the feed mixing system emission point in accordance with Method 9 40 CFR 60, Appendix A. The results shall be submitted to the Bureau of Air Quality Management for determination of compliance with applicable regulations and the conditions of this permit.

6. Permittee shall notify the Bureau of Air Quality Management prior to any compliance testing of the facility and shall submit a test plan for approval. Upon demonstration of compliance with the operational limits of this permit and submission of a complete application for an operation permit to the FDER St. Johns River Subdistrict office prior to 90 days before expiration of this permit, permittee may continue to operate in compliance with all terms of this permit until expiration of this permit or issuance of an operating permit.

Jacob D. Varn
Jacob D. Varn
Secretary

Expiration Date: July 31, 1981

Issued this 10th day of April, 19 80.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

CONSTRUCTION
PERMIT

PNT # 03

NO. AC 16-26083

CARGILL INCORPORATED
PELLET COOLING SYSTEM

DATE OF ISSUANCE

10TH APRIL 1980

DATE OF EXPIRATION

JULY 31, 1981

Jacob D. Varn

JACOB D. VARN
SECRETARY

DER FORM PERM 11-42

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

PERMIT/CERTIFICATION
NO. 16-26083

COUNTY: Duval

PROJECT: Pellet Cooling System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 & 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the construction of a pellet cooling system at a new feedmill. Particulate emissions are to be controlled by CEA-Carter Day Co. 120 "HV" cyclone. The project is located at the Cargill Incorporated Feedmill near Whitehouse. The universal transverse mercator and latitude, longitude coordinates are: UTM Zone 17, 416.7E, 3353.3N and 30°18'20"N by 81°52'30"W, respectively.

Construction shall be in accordance with the attached permit application and attached plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. "Application to Construct Air Pollution Sources", DER form 17-1.122(16).

2. Rerun of CRSTER modelling from Sholtes & Koogler, December 19, 1979.

3. Additional Information from Younglove Construction, January 10, 1980.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed

on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 16-26083
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

Specific Conditions

1. The maximum allowable particulate emissions shall be 10.85 pounds per hour and 18.69 tons per year from the cyclone emission point. No visible emissions shall be emitted from this point.

2. Operation shall be limited to 3,445 hours per year.

3. The maximum allowable raw material input shall be 80,000 pounds per hour of poultry feed.

4. During the construction phase quarterly reports on construction progress, commencing three months after initiation of construction, shall be submitted to the Bureau of Air Quality Management. The operating permit shall require maintenance of records indicating operation hours and raw material input to the system and shall be submitted annually in accordance with 17-4.14 FAC.

5. Emission tests for particulate and visible emissions shall be conducted for the pellet cooling system emission point with Methods 1 through 5, 40 CFR 60, Appendix A and Method 9 40 CFR 60, Appendix A. The results shall be submitted to the Bureau of Air Quality Management for determination of compliance with applicable regulations and the conditions of this permit.

6. Permittee shall notify the Bureau of Air Quality Management prior to any compliance testing of the facility and shall submit a test plan for approval. Upon demonstration of compliance with the operational limits of this permit and submission of a complete application for an operation permit to the FDER St. Johns River Subdistrict office prior to 90 days before expiration of this permit, permittee may continue to operate in compliance with all terms of this permit until expiration of this permit or issuance of an operating permit.

Jacob D. Varn
Secretary

Expiration Date: July 31, 1981

Issued this 10TH day of APRIL, 19 80.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

CONSTRUCTION
PERMIT

PNTH 04

NO. AC 16-26084

CARGILL INCORPORATED
GRAIN GRINDING SYSTEM

DATE OF ISSUANCE

10TH APRIL 1980

DATE OF EXPIRATION

JULY 31, 1981

Jacob D. Varn

JACOB D. VARN
SECRETARY

DER FORM PERM 11-42

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

PERMIT/CERTIFICATION NO. 16-26084

COUNTY: Duval

PROJECT: Grain Grinding System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 & 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the construction of a grain grinding system at a new feedmill. Particulate emissions are to be controlled by Flex Kleen Model 84 BVS-36 bag filter. The project is located at the Cargill Incorporated Feedmill near Whitehouse. The universal transverse mercator and latitude, longitude coordinates are: UTM Zone 17, 416.7E, 3353.3N and 30°18'20"N by 81°52'30"W,respectively.

Construction shall be in accordance with the attached permit application and attached plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. "Application to Construct Air Pollution Sources", DER form 17-1.122(16).

2. Rerun of CRSTER modelling from Sholtes & Koogler, December 19, 1979.

3. Additional Information from Younglove Construction, January 10, 1980.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed

on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 16-26084
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

Specific Conditions

1. The maximum allowable particulate emissions shall be 0.115 pounds per hour and 0.187 tons per year from the bag filter emission point. No visible emissions shall be emitted from this point.

2. Operation shall be limited to 3,256 hours per year.

3. The maximum allowable raw material input shall be 64,000 pounds per hour of grain.

4. During the construction phase quarterly reports on construction progress, commencing three months after initiation of construction, shall be submitted to the Bureau of Air Quality Management. The operating permit shall require maintenance of records indicating operation hours and raw material input to the system and shall be submitted annually in accordance with 17-4.14 FAC.

5. Emission tests for visible emissions shall be conducted for the grain grinding system emission point in accordance with Method 9 40 CFR 60, Appendix A. The results shall be submitted to the Bureau of Air Quality Management for determination of compliance with applicable regulations and the conditions of this permit.

6. Permittee shall notify the Bureau of Air Quality Management prior to any compliance testing of the facility and shall submit a test plan for approval. Upon demonstration of compliance with the operational limits of this permit and submission of a complete application for an operation permit to the FDER St. Johns River Subdistrict office prior to 90 days before expiration of this permit, permittee may continue to operate in compliance with all terms of this permit until expiration of this permit or issuance of an operating permit.

Jacob D. Varn
Secretary

Expiration Date: July 31, 1981

Issued this 10TH day of APRIL, 19 80.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

CONSTRUCTION
PERMIT

pnt# 02

NO. AC 16-26085

CARGILL INCORPORATED
TRUCK RECEIVING SYSTEM

DATE OF ISSUANCE

10TH APRIL 1980

DATE OF EXPIRATION

JULY 31, 1981

Jacob D. Varn

JACOB D. VARN
SECRETARY

DER FORM PERM 11-42

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

PERMIT/CERTIFICATION
NO. AC 16-26085

COUNTY: Duval

PROJECT: Truck Receiving System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 & 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the construction of a truck receiving system at a new feedmill. Particulate emissions are to be controlled by Flex Kleen Model 100 WRS-64 bag filter. The project is located at the Cargill Incorporated Feedmill near Whitehouse. The universal transverse mercator and latitude, longitude coordinates are: UTM Zone 17, 416.7E, 3353.3N and 30°18'20"N by 81°52'30"W, respectively.

Construction shall be in accordance with the attached permit application and attached plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. "Application to Construct Air Pollution Sources", DER form 17-1.122(16).
2. Rerun of CRSTER modelling from Sholtes & Koogler, December 19, 1979.
3. Additional Information from Younglove Construction, January 10, 1980.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed

on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 16-26085
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

Specific Conditions

1. The maximum allowable particulate emissions shall be 0.31 pounds per hour and 0.08 tons per year from the bag filter emission point. No visible emissions shall be emitted from this point.

2. Operation shall be limited to 519 hours per year.

3. The maximum allowable raw material input shall be 195,800 pounds per hour of grain and feed ingredients.

4. During the construction phase quarterly reports on construction progress, commencing three months after initiation of construction, shall be submitted to the Bureau of Air Quality Management. The operating permit shall require maintenance of records indicating operation hours and raw material input to the system and shall be submitted annually in accordance with 17-4.14 FAC.

5. Emission tests for visible emissions shall be conducted for the truck receiving system emission point in accordance with Method 9 40 CFR 60, Appendix A. The results shall be submitted to the Bureau of Air Quality Management for determination of compliance with applicable regulations and the conditions of this permit.

6. Permittee shall notify the Bureau of Air Quality Management prior to any compliance testing of the facility and shall submit a test plan for approval. Upon demonstration of compliance with the operational limits of this permit and submission of a complete application for an operation permit to the FDER St. Johns River Subdistrict office prior to 90 days before expiration of this permit, permittee may continue to operate in compliance with all terms of this permit until expiration of this permit or issuance of an operating permit.

Jacob D. Varn
Jacob D. Varn
Secretary

Expiration Date: July 31, 1981

Issued this 10TH day of APRIL, 19 80.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

CONSTRUCTION
PERMIT

PAT # 01

NO. AC 16-26086

CARGILL INCORPOATED
RECEIVING SYSTEM

DATE OF ISSUANCE

10TH APRIL 1980

DATE OF EXPIRATION

JULY 31, 1981

Jacob D. Varn

JACOB D. VARN
SECRETARY

DER FORM PERM 11-42

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

PERMIT/CERTIFICATION NO. AC 16-26086

COUNTY: Duval

PROJECT: Receiving System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 & 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the construction of a receiving system at a new feedmill. Particulate emissions are to be controlled by Flex Kleen Model 84 WRS-48 bag filter. The project is located at the Cargill Incorporated Feedmill near Whitehouse. The universal transverse mercator and latitude, longitude coordinates are: UTM Zone 17, 416.7E, 3353.3N and 30°18'20"N by 81°52'30"W, respectively.

Construction shall be in accordance with the attached permit application and attached plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. "Application to Construct Air Pollution Sources", DER form 17-1.122(16).

2. Rerun of CRSTER modelling from Sholtes & Koogler, December 19, 1979.

3. Additional Information from Younglove Construction, January 10, 1980.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed

PERMIT NO.: AC 16-26086
APPLICANT: Cargill, Incorporated

on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 16-26086
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

Specific Conditions

1. The maximum allowable particulate emissions shall be 0.15 pounds per hour and 0.13 tons per year from the bag filter emission point. No visible emissions shall be emitted from this point.

2. Operation shall be limited to 1,730 hours per year.

3. The maximum allowable raw material input shall be 195,800 pounds per hour of grain and feed ingredients.

4. During the construction phase quarterly reports on construction progress, commencing three months after initiation of construction, shall be submitted to the Bureau of Air Quality Management. The operating permit shall require maintenance of records indicating operation hours and raw material input to the system and shall be submitted annually in accordance with 17-4.14 FAC.

5. Emission tests for visible emissions shall be conducted for the receiving system emission point in accordance with Method 9 40 CFR 60, Appendix A. The results shall be submitted to the Bureau of Air Quality Management for determination of compliance with applicable regulations and the conditions of this permit.

6. Permittee shall notify the Bureau of Air Quality Management prior to any compliance testing of the facility and shall submit a test plan for approval. Upon demonstration of compliance with the operational limits of this permit and submission of a complete application for an operation permit to the FDER St. Johns River Subdistrict office prior to 90 days before expiration of this permit, permittee may continue to operate in compliance with all terms of this permit until expiration of this permit or issuance of an operating permit.

Jacob D. Varn
Jacob D. Varn
Secretary

Expiration Date: July 31, 1981

Issued this 10TH day of APRIL, 1980.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

PS Form 3811, Aug. 1978 — RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one).
- [x] Show to whom and date delivered .... ¢
- [ ] Show to whom, date, and address of delivery .. ¢
- [ ] RESTRICTED DELIVERY
  Show to whom and date delivered .... ¢
- [ ] RESTRICTED DELIVERY.
  Show to whom, date, and address of delivery . $

(CONSULT POSTMASTER FOR FEES) Att Busch

2. ARTICLE ADDRESSED TO:
Mr. Robert Kappelman
515 W. 6th St.
Jacksonville, FL 32206

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	344203	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent
Rickey Adams

4. DATE OF DELIVERY: 3-1-80 — POSTMARK: 1980

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: — CLERK'S INITIALS

☆ GPO: 1978-272-382

No. 344201

RECEIPT FOR CERTIFIED MAIL—30¢ (plus postage)

SENT TO: Mr. Doug Dutton Busch
STREET AND NO.: 3426 Biles Rd
P.O., STATE AND ZIP CODE: Jack FL 32202

POSTMARK OR DATE

OPTIONAL SERVICES FOR ADDITIONAL FEES

RETURN RECEIPT SERVICES
1. Shows to whom and date delivered .... 15¢
With delivery to addressee only .... 65¢
2. Shows to whom, date and where delivered .. 35¢
With delivery to addressee only .... 85¢

DELIVER TO ADDRESSEE ONLY .... 50¢
SPECIAL DELIVERY (extra fee required) ....

PS Form 3800 Apr. 1971 — NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL — (See other side) ☆ GPO : 1972 O - 460-743

No. 344202

RECEIPT FOR CERTIFIED MAIL—30¢ (plus postage)

SENT TO: Mr. Robert Kappelman Cargill
STREET AND NO.: 515 W. 6th St.
P.O., STATE AND ZIP CODE: Jacksonville, FL 32206

POSTMARK OR DATE

OPTIONAL SERVICES FOR ADDITIONAL FEES

RETURN RECEIPT SERVICES
1. Shows to whom and date delivered .... 15¢
With delivery to addressee only .... 65¢
2. Shows to whom, date and where delivered .. 35¢
With delivery to addressee only .... 85¢

DELIVER TO ADDRESSEE ONLY .... 50¢
SPECIAL DELIVERY (extra fee required) ....

PS Form 3800 Apr. 1971 — NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL — (See other side) ☆ GPO : 1972 O - 460-743

RECEIPT FOR CERTIFIED MAIL—30¢ (plus postage)

SENT TO: Mr. Robert Kappelman Busch
STREET AND NO.: 515 W. 6th St.
P.O., STATE AND ZIP CODE: Jacksonville, FL 32206

POSTMARK OR DATE

OPTIONAL SERVICES FOR ADDITIONAL FEES — RETURN RECEIPT SERVICES: 1. Shows to whom and date delivered 15¢; With delivery to addressee only 65¢; 2. Shows to whom, date and where delivered 35¢; With delivery to addressee only 85¢; DELIVER TO ADDRESSEE ONLY 50¢; SPECIAL DELIVERY (extra fee required)

PS Form 3800 Apr. 1971 — NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL — (See other side) ☆ GPO : 1972 O - 460-743

No. 344203

RECEIPT FOR CERTIFIED MAIL—30¢ (plus postage)

Att Busch

SENT TO: Mr. Charles Nolan
STREET AND NO.: 667 Kingsley Ave
P.O., STATE AND ZIP CODE: Orange Park FL 32073

POSTMARK OR DATE

OPTIONAL SERVICES FOR ADDITIONAL FEES — RETURN RECEIPT SERVICES: 1. Shows to whom and date delivered 15¢; With delivery to addressee only 65¢; 2. Shows to whom, date and where delivered 35¢; With delivery to addressee only 85¢; DELIVER TO ADDRESSEE ONLY 50¢; SPECIAL DELIVERY (extra fee required)

PS Form 3800 Apr. 1971 — NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL — (See other side) ☆ GPO : 1972 O - 460-743

No. 344204

RECEIPT FOR CERTIFIED MAIL—30¢ (plus postage)

Att. Busch

SENT TO: Mr. John Mueller
STREET AND NO.: 111 Busch Dr
P.O., STATE AND ZIP CODE: Jacksonville Fla

POSTMARK OR DATE

OPTIONAL SERVICES FOR ADDITIONAL FEES — RETURN RECEIPT SERVICES: 1. Shows to whom and date delivered 15¢; With delivery to addressee only 65¢; 2. Shows to whom, date and where delivered 35¢; With delivery to addressee only 85¢; DELIVER TO ADDRESSEE ONLY 50¢; SPECIAL DELIVERY (extra fee required)

PS Form 3800 Apr. 1971 — NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL — (See other side) ☆ GPO : 1972 O - 460-743

No. 344205

PS Form 3811, Aug. 1978

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one).
- ☑ Show to whom and date delivered. . . . . ¢
- ☐ Show to whom, date, and address of delivery. . . . ¢
- ☐ RESTRICTED DELIVERY
  Show to whom and date delivered. . . . . ¢
- ☐ RESTRICTED DELIVERY.
  Show to whom, date, and address of delivery. $

(CONSULT POSTMASTER FOR FEES) Certified

2. ARTICLE ADDRESSED TO:
Mr. Robert Kappelmann
515 W. 6th St
Jacksonville FL 32206

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	344202	

4. (Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

Rickey Adkins

DATE OF DELIVERY 3-17-80

POSTMARK 1980

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

☆ GPO: 1978-272-382

P09 5472978

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Cargill

SENT TO
Mr. Doug Dutton
STREET AND NO.
3426 Bells Rd
P.O., STATE AND ZIP CODE
Jack, FL 32202

POSTAGE		$
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE	¢
OPTIONAL SERVICES	SPECIAL DELIVERY	¢
OPTIONAL SERVICES	RESTRICTED DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES		$
POSTMARK OR DATE		

PS Form 3800, Apr. 1976

No. 466665

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse) Anh Busch

SENT TO
Mr. Don M. DeHart
STREET AND NO.
St. Louis, Mo. 63118
P.O., STATE AND ZIP CODE

POSTAGE		$
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE	¢
OPTIONAL SERVICES	SPECIAL DELIVERY	¢
OPTIONAL SERVICES	RESTRICTED DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES		$
POSTMARK OR DATE		

PS Form 3800, Apr. 1976

No. 466664

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse) Cargill ~~Busch~~

SENT TO
Mr. Robert Wellman
STREET AND NO.
P.O. Box 9300
P.O., STATE AND ZIP CODE
Minn. Minnesota

POSTAGE		$5440
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE	¢
OPTIONAL SERVICES	SPECIAL DELIVERY	¢
OPTIONAL SERVICES	RESTRICTED DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES		$
POSTMARK OR DATE		

PS Form 3800, Apr. 1976

PS Form 3811, Aug. 1978

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one).
- ☑ Show to whom and date delivered. ____¢
- ☐ Show to whom, date, and address of delivery. ____¢
- ☐ RESTRICTED DELIVERY
  Show to whom and date delivered. ____¢
- ☐ RESTRICTED DELIVERY.
  Show to whom, date, and address of delivery. $____
  (CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
mr. Don M. DeHart, Anh Busch.
St. Louis, Mo. 63118

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	466665	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY
MAR 13 1980

POSTMARK
St. Louis, Mo. Maryville Gardens Sta.
MAR 13 1980
USPS

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

☆ GPO: 1978-272-382

No. 466663

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse) Cargill ~~Busch~~

SENT TO
Mr. Marilyn Clancy
STREET AND NO.
3165 Pierce St.
P.O., STATE AND ZIP CODE
Sioux City, Iowa

POSTAGE		54164
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE	¢
OPTIONAL SERVICES	SPECIAL DELIVERY	¢
OPTIONAL SERVICES	RESTRICTED DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
OPTIONAL SERVICES / RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES		$
POSTMARK OR DATE		

PS Form 3800, Apr. 1976

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

MEMORANDUM

TO: Mr. Robert B. Wellman, V.P. Cargill
Mr. Maclyn B. Clancy, P.E.

FROM: Steve Smallwood, Chief
Bureau of Air Quality Management

DATE: March 7, 1980

SUBJ: Proposed Department Action on Cargill, Incorporated's Applications to Construct a Poultry Feed Mill in Duval County, Florida.

Attached please find one copy each of the five proposed Construction Permits, Technical Evaluations, and Statements of Department Intent regarding the Applications to Construct as cited above.

Comments are to be submitted, in writing, to Mr. John Svec, Bureau of Air Quality Management, (904) 488-1344.

SS:caa

ATTACHMENTS

CONSTRUCTION NOTICE

The Florida Department of Environmental Regulation (DER) has received applications from and intends to issue Construction Permits to Cargill, Inc. for the construction of a L.C. New Broiler Feedmill to be located at 112 Halsema Road, Whitehouse, in Duval County, Florida. A determination of Best Available Control Technology was not required. Copies of the Applications, Technical Evaluation, and Departmental Intent are available for inspection at the following offices:

DER, St. Johns River Subdistrict
3426 Bills Road
Jacksonville, Florida 32207

DER Bureau of Air Quality Mgt.
2600 Blair Stone Road
Tallahassee, Florida 32301

Duval County Dept.of Health, Welfare & Bio-Env. Serv.
Div. of Bio-Env. Serv.
515 West 6th Street
Jacksonville, Florida 32206

Comments on this action shall be submitted in writing to John Svec of the Tallahassee office, within 30 days of this notice.

To appear in: Times-Union
(Jacksonville)
on: 3/9/80

Preliminary Determination

and

Technical Review

Cargill, Incorporated

Feedmill

Jacksonville, Florida

Construction Permit

Application Numbers:

AC 16-26082
AC 16-26083
AC 16-26084
AC 16-26085
AC 16-26086

Florida Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

March 4, 1980

I. PROPOSED DEPARTMENT ACTION

The Department intends to issue the requested construction permits to Cargill, Incorporated for a new feedmill to be located at 112 Halsema Road in Jacksonville, subject to public comment received as a result of this notice.

Any person wishing to file comments on this proposed action, may do so by submitting such comments in writing to:

John Svec
Florida Department of Environmental Regulation
Bureau of Air Quality Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Any comments received within thirty days after publication of this notice will be considered and noted in the Department's final determination.

Any person whose substantial interests would be affected by the issuance or denial of this permit may request an administrative hearing by filing a petition for hearing in accordance with the provisions of Chapter 28-5, specifically as set forth in Section 27-5.15 (copy attached). Such petition must be filed within 14 days of the date of this notice. Such petition is to be filed with:

Mary Clark
Office of General Counsel
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

II. SUMMARY OF EMISSION AND AIR QUALITY ANALYSIS:

a. The proposed construction is located in that portion of Duval County which is declared "nonattainment" for the criteria pollutant ozone. This location is an "attainment" area of the ambient air quality standards for the remaining criteria pollutants. However, this location is in the "area of influence" of the Duval County Particulate Nonattainment Area".

b. The significant sources of particulate emissions are projected to be:

	Actual Emissions
Truck Receiving system	0.08 Tons per year
Receiving system	0.13 Tons per year
Feed Mixing System	0.07 Tons per year
Grain Grinding System	0.19 Tons per year
Pellet Cooling System	18.69 Tons per year

III. SYNOPSIS OF APPLICATION:

a. Name and Address of Applicant:

Cargill, Incorporated
P. O. Box 9300
Minneapolis, Minnesota 55440

b. Description of Project and Controls:

This project involves the construction of a new feedmill. The feedmill will receive, transfer and store grain and other feed ingredients. The mill will also grind grain, mix the feed ingredients, pelletize the feed, and store the finished project for shipping. Particulate emissions are proposed to be controlled by the installation of Flex Kleen bag filters on the truck receiving system, the receiving system, the grain grinding system and the feed mixing system and by the installation of a CEA-Carter Day Co. 120 "HV" cyclone on the pellet cooling system.

c. Description of Individual Processes, Proposed Process Rates and Emissions:

This project entails the construction of a new feedmill in Duval County. The feedmill processes and pollutant emissions are projected as follows:

In the truck receiving system, grain and other feed ingredients are received into a hopper from self-unloading trucks in a completely enclosed receiving building. Particulate emissions in the receiving building are to be controlled by pick-up hoods which vent the emissions into a Flex Kleen Model 100 WRS-64 bag filter. The product collected by the fabric filter is discharged back into the conveying system which transfers the raw material to the receiving system. The maximum operating hours for the truck receiving system is projected to be 519 hours per year. The maximum process rate is to be 195,800 pounds per hour. Potential particulate emissions are projected to be 31.27 pounds per hour and 8.11 tons per year. The bag filter is projected to be 99% efficient in controlling emissions. Maximum actual particulate emissions are proposed to be 0.31 pounds per hour and 0.081 tons per year.

In the receiving system, the grain and other feed ingredients and received from the truck and rail receiving conveyors. The raw material is transferred via the bucket elevators to the storage bins. Particulate emissions are proposed to be controlled by a vent system with pickup points at the bucket elevators, the bag spout and the storage bins. The particulate emissions are to be brought into a Flex Kleen model 84 WRS-48 bag filter. The maximum operating hours of this system are scheduled to be 1,730 hours per year. The process rate is projected to be 195,800 pounds

per hour. Potential particulate emissions are projected to be 15.03 pounds per hour and 13.01 tons per year. Actual particulate emissions are proposed to be 0.15 pounds per hour and 0.13 tons per year through the use of a 99% efficient bag filter collector. The particulate collected in the bag filter is to be returned to the process.

In the grain grinding system, grain enters the system from four storage silos. The grain is then ground in a hammermill and transferred via a bucket elevator to storage bins. Particulate emissions are to be controlled by the use of a Flex Kleen Model 84 BVS-36 bag filter. The bag filter is to control emissions from the hammermill, the bucket elevator and the storage bins. The particulate collected in the bag filter is to be returned to the process. The maximum operating schedule is projected to be 3,256 hours per year. The maximum process rate is 64,000 pounds per hour. Potential particulate emissions are projected to be 11.5 pounds per hour and 18.72 tons per year. Particulate emissions are to be controlled by 99% efficient bag filters. Actual particulate emissions are estimated to be 0.12 pounds per hour and 0.19 tons per year.

In the feed mixing system, mixed poultry and livestock feeds are received from the mixer surge bin. The feeds are then transferred to storage bins through bucket elevators. Particulate emissions are vented to a Flex Kleen Model 84 BVS-16 bag filter from vent pick-ups in the elevator boot, the storage bins and plant interior. The particulate contained in the fabric filter will be returned to the process. The maximum operating time is projected to be 2,823 hours per year. The maximum process rate is presented as 120,000 pounds per hour. Potential emissions are estimated to be 5.30 pounds per hour and 7.49 tons per year. The control efficiency of the bag filter is projected to be 99%. Therefore, actual particulate emissions are 0.053 pounds per hour and 0.0749 tons per year.

In the pellet cooling system, the mixed poultry and livestock feeds are received from the working bins. The feed is pelletized and cooled in a horizontal moving perforated tray-type cooler by moving an air stream through the pellets. The pellets are then transferred by a bucket elevator to the storage bins. Particulate emissions are to be controlled by a CEA-Carter Day Co. 120 "HV" cyclone and returned to the process. The maximum operating time is projected to be 3,445 hours per year. The maximum process rate is 80,000 pounds per hour of poultry feed. Potential particulate emissions are estimated to be 108.53 pounds per hour and 186.93 tons per year. The control efficiency of the cyclone is estimated to be 90%. Therefore, actual emissions are projected to be 10.85 pounds per hour and 18.69 tons per year.

No particulate emissions are expected from the railcar unloading system and the bulk truck loading area. Both operations are to be performed in entirely enclosed buildings with electrically operated quick closing doors on all openings to prevent the possibility of particulate reaching the outside air.

IV. RULE APPLICABILITY

Since no volatile organic compounds (VOC) emissions are to be given off from these proposed sources, the applications are not subject to the requirements of 17-2.17 for the Duval County Ozone Nonattainment Area.

The pellet cooling system is a major source as defined in 17-2.02(6)(a) FAC. Mathematical modelling was submitted which demonstrates the impact on the Duval County Particulate Nonattainment Area is less than the significance levels set forth in Table I, Subsection 17-2.17(2)(c) FAC. The remaining applications are minor sources as defined in 17-2.02(6)(b) and do not constitute a series of modifications as set forth in 17-2.17(7)(b). Therefore these applications are also exempt from the requirements of 17-2.17, 17-2.18 and 17-2.19 FAC.

The facility is not a major emitting facility as defined in 17-2.02(70), therefore these applications are not subject to the requirements of 17-2.04 Prevention of Significant Deterioration (PSD).

These projects are subject to 17-4.23 which requires the use of best and latest technology on new sources and to 17-4.07 which authorizes the Department to impose reasonable permit conditions necessary to minimize air pollution.

V. FINDINGS

1. Emission estimates were based upon emission testing data from Ralston Purina Company, Louisville, Kentucky and the control efficiency of the equipment. Potential and actual emissions are projected by the applicant to be:

Source	Potential Emissions		Actual Emissions	
	lbs/hr.	tons/yr.	lbs/hr.	tons/yr.
Truck receiving	31.27	8.11	0.31	0.08
Receiving system	15.03	13.01	0.15	0.13
Grain grinding	11.50	18.72	0.115	0.187
Feed mixing	5.30	7.49	0.053	0.075
Pellet cooling	108.53	186.93	10.85	18.69

2. Based upon the conservative estimates of control equipment efficiencies, the maximum actual emission rates should equal the allowable emission rate. Based upon the definition of allowable emissions (17-2.02(8)), the process weight table for calculating allowable emissions does not apply, since these emissions exceed potential emissions.

3. The pellet cooling system is a major source, i.e. greater than 100 tons per year potential emissions. The remaining sources are minor sources. The facility is not a major emitting facility since total potential emissions do not exceed 250 tons per year. Therefore, the requirements of 17-2.04 (Prevention of Significant Deterioration) do not apply to these sources.

4. The truck receiving, receiving system, grain grinding and feed mixing systems are minor sources of particulate emissions. Therefore impact analysis on the nonattainment area is not required. Since the pellet cooling system is a major source, mathematical modelling was submitted showing that the significance levels of 1 ug/m^3 annual average and 5 ug/m^3 24 hour average were not exceeded in the nonattainment area. Therefore, the applications are exempt from the requirements of 17-2.17, 17-2.18 and 17-2.19.

5. The applicant states that no particulate matter will be emitted to the ambient air from the railcar unloading station or the bulk truck loading area. This fact should be verified before an operating permit is issued.

6. The maximum operating hours will be:

System	Hours per year
Truck receiving	519
Receiving	1730
Grain grinding	3256
Feed mixing	2823
Pellet cooling	3445

7. The maximum throughput of grain and other feed ingredients for each system will be:

System	Pounds per hour
Truck receiving	195,800
Receiving	195,800
Grain grinding	64,000
Feed mixing	120,000
Pellet cooling	80,000

8. Construction should commence and be completed within a reasonable time based on the projections included in the application.

9. The applicant should submit periodic reports on construction progress.

10. The actual particulate emissions from the pellet cooling system emission point should be verified by test using standard test methods prior to issuance of an operating permit. Visible emissions of all emission points described in the application should be verified by tests using standard test methods prior to the issuance of an operating permit. As part of the operating permit, periodic tests on the emission points should be required.

11. Construction should reasonably conform to the plans submitted.

12. Upon obtaining an operating permit, the applicant should submit periodic reports on the actual operation of the facility.

VI. PROPOSED ALLOWABLE EMISSIONS AND PERMIT CONDITIONS:

See Draft Permits

Attachment: Rule 28-5

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

PERMIT/CERTIFICATION NO. AC 16-26082

COUNTY: Duval

PROJECT: Feed Mixing System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 & 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the construction of a feed mixing system at a new feedmill. Particulate emissions are to be controlled by Flex Kleen Model 84 BVS-16 bag filter. The project is located at the Cargill Incorporated Feedmill near Whitehouse. The universal transverse mercator and latitude, longitude coordinates are: UTM Zone 17, 416.7E 3353.3N and 30°18'20"N by 81°52'30"W, respectively.

Construction shall be in accordance with the attached permit application and attached plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. "Application to Construct Air Pollution Sources", DER form 17-2.122(16).

2. Rerun of CRSTER modelling from Sholtes & Koogler, December 19, 1979.

3. Additional Information from Younglove Construction, January 10, 1980.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed

PERMIT NO.: AC 16-26082
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 16-26082
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

Specific Conditions

1. The maximum allowable particulate emissions shall be 0.053 pounds per hour and 0.075 tons per year from the bag filter emission point. No visible emissions shall be emitted from this point.

2. Operation shall be limited to 2,823 hours per year.

3. The maximum allowable raw material input shall be 120,000 pounds per hour of poultry feed.

4. During the construction phase quarterly reports on construction progress, commencing three months after initiation of construction, shall be submitted to the Bureau of Air Quality Management. The operating permit shall require maintenance of records indicating operation hours and raw material input to the system and shall be submitted annually in accordance with 17-4.14 FAC.

5. Emission tests for visible emissions shall be conducted for the feed mixing system emission point in accordance with Method 9 40 CFR 60, Appendix A. The results shall be submitted to the Bureau of Air Quality Management for determination of compliance with applicable regulations and the conditions of this permit.

6. Permittee shall notify the Bureau of Air Quality Management prior to any compliance testing of the facility and shall submit a test plan for approval. Upon demonstration of compliance with the operational limits of this permit and submission of a complete application for an operation permit to the FDER St. Johns River Subdistrict office prior to 90 days before expiration of this permit, permittee may continue to operate in compliance with all terms of this permit until expiration of this permit or issuance of an operating permit.

Jacob D. Varn
Secretary

Expiration Date: July 31, 1981

Issued this _____ day of _____, 19 _____.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

PERMIT/CERTIFICATION NO. 16-26083

COUNTY: Duval

PROJECT: Pellet Cooling System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 & 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the construction of a pellet cooling system at a new feedmill. Particulate emissions are to be controlled by CEA-Carter Day Co. 120 "HV" cyclone. The project is located at the Cargill Incorporated Feedmill near Whitehouse. The universal transverse mercator and latitude, longitude coordinates are: UTM Zone 17, 416.7E, 3353.3N and 30°18'20"N by 81°52'30"W, respectively.

Construction shall be in accordance with the attached permit application and attached plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. "Application to Construct Air Pollution Sources", DER form 17-1.122(16).

2. Rerun of CRSTER modelling from Sholtes & Koogler, December 19, 1979.

3. Additional Information from Younglove Construction, January 10, 1980.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed

on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 16-26083
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

Specific Conditions

1. The maximum allowable particulate emissions shall be 10.85 pounds per hour and 18.69 tons per year from the cyclone emission point. No visible emissions shall be emitted from this point.

2. Operation shall be limited to 3,445 hours per year.

3. The maximum allowable raw material input shall be 80,000 pounds per hour of poultry feed.

4. During the construction phase quarterly reports on construction progress, commencing three months after initiation of construction, shall be submitted to the Bureau of Air Quality Management. The operating permit shall require maintenance of records indicating operation hours and raw material input to the system and shall be submitted annually in accordance with 17-4.14 FAC.

5. Emission tests for particulate and visible emissions shall be conducted for the pellet cooling system emission point with Methods 1 through 5, 40 CFR 60, Appendix A and Method 9 40 CFR 60, Appendix A. The results shall be submitted to the Bureau of Air Quality Management for determination of compliance with applicable regulations and the conditions of this permit.

6. Permittee shall notify the Bureau of Air Quality Management prior to any compliance testing of the facility and shall submit a test plan for approval. Upon demonstration of compliance with the operational limits of this permit and submission of a complete application for an operation permit to the FDER St. Johns River Subdistrict office prior to 90 days before expiration of this permit, permittee may continue to operate in compliance with all terms of this permit until expiration of this permit or issuance of an operating permit.

Jacob D. Varn
Secretary

Expiration Date: July 31, 1981

Issued this _____ day of _____, 19 _____.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

PERMIT/CERTIFICATION NO. 16-26084

COUNTY: Duval

PROJECT: Grain Grinding System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 & 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the construction of a grain grinding system at a new feedmill. Particulate emissions are to be controlled by Flex Kleen Model 84 BVS-36 bag filter. The project is located at the Cargill Incorporated Feedmill near Whitehouse. The universal transverse mercator and latitude, longitude coordinates are: UTM Zone 17, 416.7E, 3353.3N and 30°18'20"N by 81°52'30"W,respectively.

Construction shall be in accordance with the attached permit application and attached plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. "Application to Construct Air Pollution Sources", DER form 17-1.122(16).

2. Rerun of CRSTER modelling from Sholtes & Koogler, December 19, 1979.

3. Additional Information from Younglove Construction, January 10, 1980.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed

on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 16-26084
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

Specific Conditions

1. The maximum allowable particulate emissions shall be 0.115 pounds per hour and 0.187 tons per year from the bag filter emission point. No visible emissions shall be emitted from this point.

2. Operation shall be limited to 3,256 hours per year.

3. The maximum allowable raw material input shall be 64,000 pounds per hour of grain.

4. During the construction phase quarterly reports on construction progress, commencing three months after initiation of construction, shall be submitted to the Bureau of Air Quality Management. The operating permit shall require maintenance of records indicating operation hours and raw material input to the system and shall be submitted annually in accordance with 17-4.14 FAC.

5. Emission tests for visible emissions shall be conducted for the grain grinding system emission point in accordance with Method 9 40 CFR 60, Appendix A. The results shall be submitted to the Bureau of Air Quality Management for determination of compliance with applicable regulations and the conditions of this permit.

6. Permittee shall notify the Bureau of Air Quality Management prior to any compliance testing of the facility and shall submit a test plan for approval. Upon demonstration of compliance with the operational limits of this permit and submission of a complete application for an operation permit to the FDER St. Johns River Subdistrict office prior to 90 days before expiration of this permit, permittee may continue to operate in compliance with all terms of this permit until expiration of this permit or issuance of an operating permit.

Jacob D. Varn
Secretary

Expiration Date: July 31, 1981

Issued this _____ day of _____, 19 _____.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

PERMIT/CERTIFICATION
NO. AC 16-26085

COUNTY: Duval

PROJECT: Truck Receiving System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 & 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the construction of a truck receiving system at a new feedmill. Particulate emissions are to be controlled by Flex Kleen Model 100 WRS-64 bag filter. The project is located at the Cargill Incorporated Feedmill near Whitehouse. The universal transverse mercator and latitude, longitude coordinates are: UTM Zone 17, 416.7E, 3353.3N and 30°18'20"N by 81°52'30"W, respectively.

Construction shall be in accordance with the attached permit application and attached plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. "Application to Construct Air Pollution Sources", DER form 17-1.122(16).

2. Rerun of CRSTER modelling from Sholtes & Koogler, December 19, 1979.

3. Additional Information from Younglove Construction, January 10, 1980.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed

on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 16-26085
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

Specific Conditions

1. The maximum allowable particulate emissions shall be 0.31 pounds per hour and 0.08 tons per year from the bag filter emission point. No visible emissions shall be emitted from this point.

2. Operation shall be limited to 519 hours per year.

3. The maximum allowable raw material input shall be 195,800 pounds per hour of grain and feed ingredients.

4. During the construction phase quarterly reports on construction progress, commencing three months after initiation of construction, shall be submitted to the Bureau of Air Quality Management. The operating permit shall require maintenance of records indicating operation hours and raw material input to the system and shall be submitted annually in accordance with 17-4.14 FAC.

5. Emission tests for visible emissions shall be conducted for the truck receiving system emission point in accordance with Method 9 40 CFR 60, Appendix A. The results shall be submitted to the Bureau of Air Quality Management for determination of compliance with applicable regulations and the conditions of this permit.

6. Permittee shall notify the Bureau of Air Quality Management prior to any compliance testing of the facility and shall submit a test plan for approval. Upon demonstration of compliance with the operational limits of this permit and submission of a complete application for an operation permit to the FDER St. Johns River Subdistrict office prior to 90 days before expiration of this permit, permittee may continue to operate in compliance with all terms of this permit until expiration of this permit or issuance of an operating permit.

Jacob D. Varn
Secretary

Expiration Date: July 31, 1981

Issued this _____ day of _____, 19 ____.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

PERMIT/CERTIFICATION NO. AC 16-26086

COUNTY: Duval

PROJECT: Receiving System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 & 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the construction of a receiving system at a new feedmill. Particulate emissions are to be controlled by Flex Kleen Model 84 WRS-48 bag filter. The project is located at the Cargill Incorporated Feedmill near Whitehouse. The universal transverse mercator and latitude, longitude coordinates are: UTM Zone 17, 416.7E, 3353.3N and 30°18'20"N by 81°52'30"W, respectively.

Construction shall be in accordance with the attached permit application and attached plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. "Application to Construct Air Pollution Sources", DER form 17-1.122(16).

2. Rerun of CRSTER modelling from Sholtes & Koogler, December 19, 1979.

3. Additional Information from Younglove Construction, January 10, 1980.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed

on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 16-26086
APPLICANT: Cargill, Incorporated
112 Halsema Road
Jacksonville, Florida

Specific Conditions

1. The maximum allowable particulate emissions shall be 0.15 pounds per hour and 0.13 tons per year from the bag filter emission point. No visible emissions shall be emitted from this point.

2. Operation shall be limited to 1,730 hours per year.

3. The maximum allowable raw material input shall be 195,800 pounds per hour of grain and feed ingredients.

4. During the construction phase quarterly reports on construction progress, commencing three months after initiation of construction, shall be submitted to the Bureau of Air Quality Management. The operating permit shall require maintenance of records indicating operation hours and raw material input to the system and shall be submitted annually in accordance with 17-4.14 FAC.

5. Emission tests for visible emissions shall be conducted for the receiving system emission point in accordance with Method 9 40 CFR 60, Appendix A. The results shall be submitted to the Bureau of Air Quality Management for determination of compliance with applicable regulations and the conditions of this permit.

6. Permittee shall notify the Bureau of Air Quality Management prior to any compliance testing of the facility and shall submit a test plan for approval. Upon demonstration of compliance with the operational limits of this permit and submission of a complete application for an operation permit to the FDER St. Johns River Subdistrict office prior to 90 days before expiration of this permit, permittee may continue to operate in compliance with all terms of this permit until expiration of this permit or issuance of an operating permit.

Jacob D. Varn
Secretary

Expiration Date: July 31, 1981

Issued this _____ day of _____, 19 _____.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

RULES OF THE ADMINISTRATIVE COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

(1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.

(2) All petitions filed under these rules should contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name and address of the petitioner or petitioners;

(c) All disputed issues of material fact. If there are none, the petition must so indicate;

(d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;

(e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;

(f) A demand for the relief to which the petitioner deems himself entitled; and

(g) Such other information which the petitioner contends is material.

To: Files

From: W. Hanks

Date: 2-28-80

Subject: USS Agri Ch Co

A pre-application meeting was held with representatives of the subject Co. (see attached list) to discuss permitting requirements for major changes at the Co.'s Ft. Meade complex. These changes involve building new H_2SO_4 plants, a TSP plant, H_3PO_4 plant and associated equipment. Existing chemical (not dry rock operations) will be shut down once the new plants are in operation.

Misc comments made during the meeting are:

1. Existing 175,000 TPY P_2O_5 H_3PO_4 plant to be replaced with a 440,000 TPY plant.
2. 2 new H_2SO_4 plants to be built - with cooling towers, elect. power generation.
3. 1 single line TSP plant will replace the existing plant (275,000 TPY)
   Size is same as 2 existing trains.
4. Gypsum pond to be modified
5. Project funded last June.
6. EPA has Environmental Impact Statement - no reply to date.
7. August/September, a contractor will be selected.
8. W.R. Grace joint partner in operation.
9. new facilities vrs. Existing - Δ Emissions
   - 19 TPY fluoride, - 28 TPY SO_2, + 20 TPY H_2SO_4 mist
10. Expect little particulate emissions from the towers.
11. PSD requirements identical to that used in Bartow.

2-28-80

USS AQW Ch Co

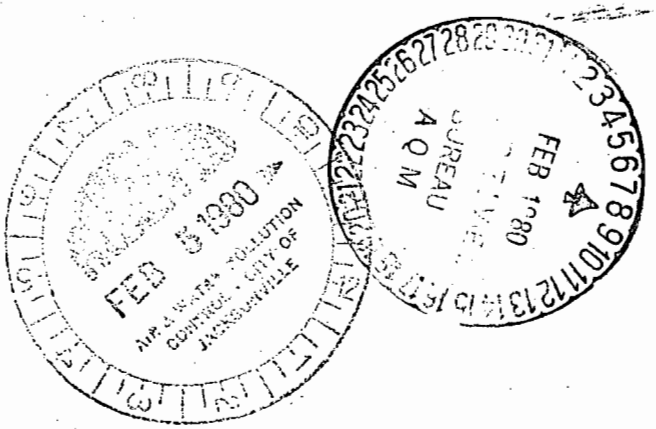
Re Application meeting with U.S. Steel for Changes at Ft. Meade

W. M. Hants	DER, Tallahassee
Robert L. Rhodes	Holland & Knight
Basil Powell	USSAC
James H Carole	USS AC
Bill Thomas	USSAC
SA Davis	USS PITTSBURGH
Jim Little	James & Moore - Atlanta
Bill Thomas	FDER-BAQM
Larry Hargo (late)	DER

Younglove

Designers and Builders of Quality Grain Handling and Feed Processing Facilities

January 29, 1980



Department of Health, Welfare &
Bio-Environmental Services
Bio-Environmental Services Division
Air and Water Pollution Control
515 West 6th Street
Jacksonville, Florida 32206

Attention: Mr. E. P. Balducci
Assistant Air Engineer

RE: Air pollution construction permits / Cargill new feed mill at Jacksonville, Florida

Dear Mr. Balducci:

We have received your letter of January 22, 1980, in which you desired to have us proportion the 24.6 pound per hour total maximum particulate matter emission rate (as determined per the CRSTER computer modeling) among the five emission points. We have distributed the 24.6 pounds per hour emission rate among the five (5) sources in the same proportion as contained in the original permit applications. These revised emission rates are summarized below and are the rates which we wish to have you consider and which would appear on the permits for the feed mill facility.

Source	Revised Maximum Particulate Matter Emission Rate - lb/hr.
1. Receiving system with baghouse	0.32
2. Truck receiving system with baghouse	0.66
3. Pellet cooling system with cyclone collector	23.25
4. Grain grinding system with baghouse	0.25
5. Feed mixing system with baghouse	0.12
Total Maximum Particulate Matter Emission Rate =	24.6 lb/hr

2015 E. Seventh • P.O. Box 1768 • Sioux City, Iowa 51102 • Phone 712/277-3906

CONSOLIDATED CITY OF JACKSONVILLE, FLORIDA

OFFICE MEMO

DATE 2/6/80

- TO Steve Smallwood, BAQM
- FROM Ed Balducci, BESD-Jax
- SUBJECT Cargill - Jax. Feed Mill, Construction Permit Applications
  January 29, 1980 letter

Enclosed is the additional information that I requested from Cargill. Please note the pellet cooler emissions. The source and the control equipment used was going to be further explored had we still been processing the application.

EPB

☐ REPLY REQUESTED

If you have any questions, please contact us.

Sincerely,

YOUNGLOVE CONSTRUCTION COMPANY

William L. Bradbury

William L. Bradbury,P. E.
Project Manager

WLB:nh

CC: Bob Ambler
Cargill, Inc.

Roger Sprock
Younglove Construction Co.

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO.

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) M. G. Hedge	INITIAL	
	DATE	
2.	INITIAL	
	DATE	
3.	INITIAL	
	DATE	
4.	INITIAL	
	DATE	

REMARKS:

Re: JDL

Cargill

INFORMATION
- REVIEW & RETURN
- REVIEW & FILE
- INITIAL & FORWARD

DISPOSITION
- REVIEW & RESPOND
- PREPARE RESPONSE
- FOR MY SIGNATURE
- FOR YOUR SIGNATURE
- LET'S DISCUSS
- SET UP MEETING
- INVESTIGATE & REPT
- INITIAL & FORWARD
- DISTRIBUTE
- CONCURRENCE
- FOR PROCESSING
- INITIAL & RETURN

FROM: Steve Smallwood

DATE

PHONE

DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES
Bio-Environmental Services Division
Air and Water Pollution Control

CITY OF JACKSONVILLE, FLORIDA

January 22, 1980

Mr. Steve Smallwood
Department of Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, FL. 32301

Dear Steve:

I am enclosing copies of the cover pages from the correspondence concerning Cargill that we discussed in our telephone conversation of January 15, 1980. Since the question I posed merely regarded whether the permitting "clock" is now running, I expect these documents will be sufficient to answer that question. If additional information is necessary, however, please let me know.

Your assistance in this matter is appreciated.

Very truly yours,

Marion DeGrove

Marion DeGrove
Associate Engineer
Air Pollution Control

MDG/cf

Younglove Construction Co.

2015 E. SEVENTH P.O. BOX 1768 SIOUX CITY, IOWA 51102 TELEPHONE 712/277-3901

January 10, 1980

Department of Health, Welfare
& Bio-Environmental Services
Bio-Environmental Services Division
Air and Water Pollution Control
515 West 6th Street
Jacksonville, Florida 32206

ATTENTION: Mr. Wayne E. Tutt, Associate Engineer

SUBJECT: Air pollution control construction permit applications for new Cargill Feed Mill at Jacksonville, Florida

Dear Mr. Tutt:

We have received a copy of your letter dated December 31, 1979, which was directed to Mr. Robert B. Wellman of Cargill, Inc., and we have also received from Cargill their reply to the questions you had asked in your letter. We have enclosed Cargill's reply letter along with five (5) copies of a flow diagram which will help to answer your question "b".

We have also directed our computer consultant to submit the re-run of the CRSTER Computer Model directly to your department. The model was re-run based upon information discussed between our consultant, Mr. Albert Henderson of Technical Services, Mrs. Marion DeGrove of your department, and ourselves.

We hope that the letter from Cargill, Inc., and the output of the CRSTER re-run will provide the additional information you desire. If you have any questions, please contact us.

Sincerely,

YOUNGLOVE CONSTRUCTION COMPANY

William L. Bradbury

William L. Bradbury, P.E.
Project Manager

WLB:nh

CC: Bob Ambler/Cargill
Roger Sprock/Younglove

January 22, 1980

Mr. William L. Bradbury, P. E.
Project Manager
YOUNGLOVE CONSTRUCTION CO.
P. O. Box 1768
Sioux City, Iowa 51102

RE: AIR POLLUTION CONSTRUCTION PERMITS/CARGILL FEED MILL
AT JACKSONVILLE, FLORIDA

Dear Mr. Bradbury:

I am in receipt of your January 10, 1980, letter and Dr. Koogler's letter of December 19, 1979, which responded to Mr. Wayne Tutt's December 31, 1979, letter requesting further information. With one exception, these two responses have adequately answered Mr. Tutt's questions.

According to Chapter 120, Florida Statutes, a permit must be issued within 90 days of the receipt of a complete application. Since all the additional information requested was received by this office on January 14, 1980, a letter of intent to deny or issue the permit must be sent to you soon. A permit cannot be issued unless the individual emissions rates are specified on each application. Therefore, please proportion the 24.6 lb/hr. (3.1 grams/sec) total maximum particulate matter emission rate among the five emission points and designate these specific values in a letter by February 15, 1980.

If you have questions, please call me at (904) 633-3033.

Very truly yours,

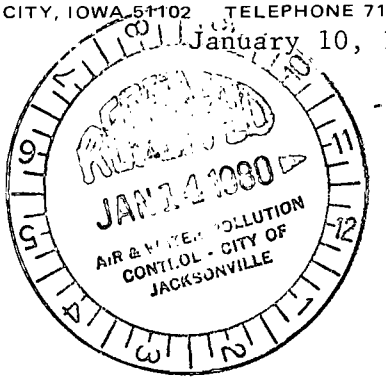
E. P. Balducci,
Assistant Air Engr.

EPB/jg

Younglove Construction Co.

2015 E. SEVENTH P.O. BOX 1768 SIOUX CITY, IOWA 51102 TELEPHONE 712/277-3901

January 10, 1980



- Modeling allowable - exclude (PSD) max rate determination - must be divided up between the sources.

Department of Health, Welfare
& Bio-Environmental Services
Bio-Environmental Services Division
Air and Water Pollution Control
515 West 6th Street
Jacksonville, Florida 32206

ATTENTION: Mr. Wayne E. Tutt, Associate Engineer

SUBJECT: Air pollution control construction permit applications for new Cargill Feed Mill at Jacksonville, Florida

Dear Mr. Tutt:

We have received a copy of your letter dated December 31, 1979, which was directed to Mr. Robert B. Wellman of Cargill, Inc., and we have also received from Cargill their reply to the questions you had asked in your letter. We have enclosed Cargill's reply letter along with five (5) copies of a flow diagram which will help to answer your question "b".

We have also directed our computer consultant to submit the re-run of the CRSTER Computer Model directly to your department. The model was re-run based upon information discussed between our consultant, Mr. Albert Henderson of Technical Services, Mrs. Marion DeGrove of your department, and ourselves.

We hope that the letter from Cargill, Inc., and the output of the CRSTER re-run will provide the additional information you desire. If you have qny questions, please contact us.

Sincerely,

YOUNGLOVE CONSTRUCTION COMPANY

William L. Bradbury

William L. Bradbury, P.E.
Project Manager

WLB:nh

CC: Bob Ambler/Cargill
Roger Sprock/Younglove

CARGILL

15407 McGinty Road
Minnetonka, Minnesota
Mail Address: P. O. Box 9300
Minneapolis, Minnesota 55440

January 7, 1980

Younglove Construction Company
P.O. Box 1768
Sioux City, Iowa 51102
Attention: Mr. Bill Bradbury

SUBJECT: New Feed Mill at Jacksonville, Florida

Dear Bill:

We are enclosing a copy of a letter dated December 31, 1979, from Mr. Wayne E. Tutt, Associate Engineer of the Department of Health, Welfare and Bio-Environmental Services of the City of Jacksonville, Florida to our Mr. Robert B. Wellman.

Mr. Tutt has requested that the CRSTER Computer Model accompanying this permit application be re-run with corrected input data. Will you please have this model re-run in conformance with the Department requirements and re-submit the model to the Department. We understand that you have discussed these requirements with the Department by telephone.

Mr. Tutt has also requested certain information, and we ask that you submit that information to them as follows:

Question A

How does Cargill propose to control the dust emissions from the railcar unloading area and the finished products discharge area?

Answer:

1. All incoming rail shipments will be by hopper cars.

2. Material will be "choke fed" from the car outlet to the receiving hopper. That is, there will be no dust producing free fall from the car to the hopper after the initial opening. A canvas boot will be provided to enclose the open area between the car outlet and the hopper outlet to prevent air entrainment of material and contain any dust.

3. The entire car unloading are is enclosed in a steel building with electrically operated doors on all openings to exclude any wind currents that might disturb the unloading area and to prevent any possibility of dust reaching the outside atmosphere.

4. The railcar receiving installation as designed is in accordance with the best technology we are aware of, and meets or exceeds the recommendations of our industry standard "Environmental Controls for Feed Manufacturing and Grain Handling", Section I.2.A., published by the American Feed Manufacturers Association.

5. Finished products will consist entirely of poultry feeds. 80% or more of the finished product will be in pellet form, normally coated with liquid tallow and the balance will normally be blended with liquid tallow, thus giving a relatively dust-free material.

6. Canvas boots are provided to extend from the bulk finished product bin discharge gates to the interior of the bulk truck compartments to prevent air entrainment of material and contain any dust.

7. The entire bulk truck loading area is enclosed in a steel and concrete building with electrically operated quick closing doors on all openings to exclude any wind currents that might disturb the unloading area and to prevent any possibility of dust reaching the outside atmosphere.

8. The bulk finished feed loading installation as designed is in accordance with the best technology we are aware of and meets or exceeds the recommendations of our industry standard "Environmental Controls for Feed Manufacturing and Grain Handling", Section I.2.12., published by the American Feed Manufacturers Association.

Question B

Do silos #1-4 have any dust control equipment, and if not, how will the emissions be controlled?

Answer:

1. Silos #1 through #4 are intervented to Silo #6, which has a vent connection into the dust control system. Please submit an up to date flow print showing this connection.

2. All silos are totally enclosed concrete structures with gasketed manholes and there would be no normal dust emissions from them. The dust control system has been installed to prevent any possible pressure build-up within the silos.

Question C

The average weight of materials received, based on master formula calculations was submitted as 44 lbs/cu. ft. Is this the maximum density of conglomerate materials that might be received? If not, please submit the maximum value.

Answer:

1. As stated, the average master formula weight will be 44 lbs/cu. ft.

2. 64% of incoming ingredients will be shelled corn at 45 lbs/cu. ft. 34% will be ingredients weighing less than 44 lbs/cu. ft. The above materials will be received at 100% capacity of the receiving system.

3. The following minor ingredients total less than 2% of the total received:

   .31% De-flourinated rock phosphate @ 84 lbs/cu. ft.
   .54% Ground limestone @ 90 lbs/cu. ft.
   .31% Salt @ 74 lbs/cu. ft.
   .13% Granite grit @ 100 lbs/cu. ft.
   .58% Oyster shell grit @ 70 lbs/cu. ft.

   These materials, because of added horsepower requirements due to higher densities and coefficiences of friction, will be received at 25% capacity of the receiving system.

We believe this will supply the information that the Department has asked for. Please call me if you have any questions.

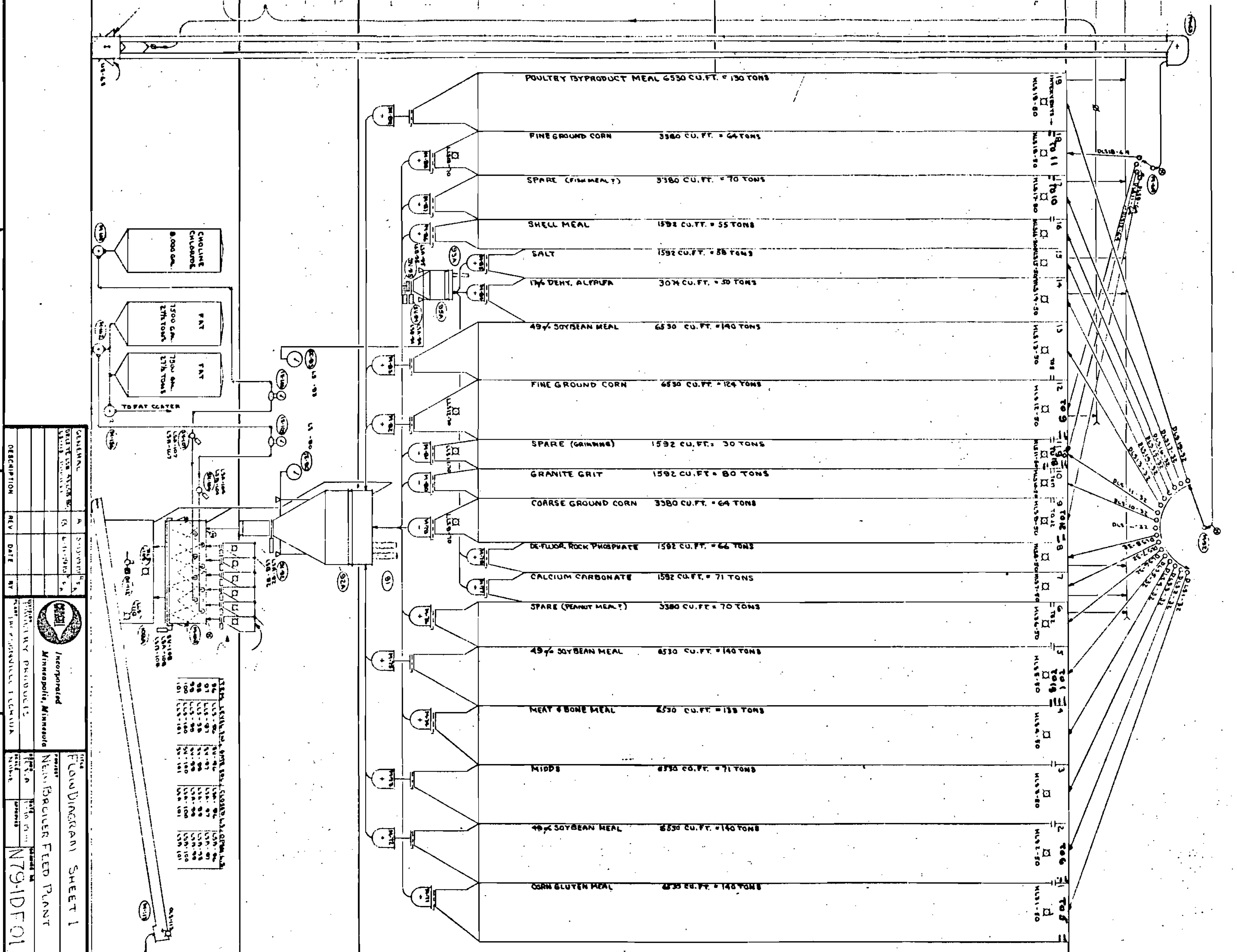
Sincerely,

Robert F. Ambler
Chief Design Engineer

RFA:dl

Enclosure

cc: Charles Anderson
Bob Wellman/PPD
John Ross/Jacksonville
Roger Sprock/Younglove
Wayne E. Tutt/Dept. of Health, Welfare
& Bio-Environmental Services

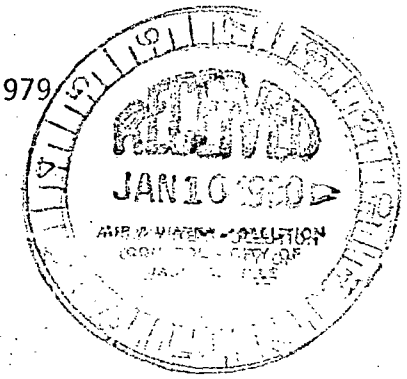


POULTRY BYPRODUCT MEAL 6530 CU.FT. = 130 TONS
FINE GROUND CORN 3380 CU.FT. = 64 TONS
SPARE (FISH MEAL?) 3380 CU.FT. = 70 TONS
SHELL MEAL 1592 CU.FT. = 55 TONS
SALT 1592 CU.FT. = 58 TONS
17% DEHY. ALFALFA 3074 CU.FT. = 50 TONS
49% SOYBEAN MEAL 6530 CU.FT. = 140 TONS
FINE GROUND CORN 6530 CU.FT. = 124 TONS
SPARE (GRINDING) 1592 CU.FT. = 30 TONS
GRANITE GRIT 1592 CU.FT. = 80 TONS
COARSE GROUND CORN 3380 CU.FT. = 64 TONS
DE-FLUOR. ROCK PHOSPHATE 1592 CU.FT. = 66 TONS
CALCIUM CARBONATE 1592 CU.FT. = 71 TONS
SPARE (PEANUT MEAL?) 3380 CU.FT. = 70 TONS
49% SOYBEAN MEAL 6530 CU.FT. = 140 TONS
MEAT & BONE MEAL 6530 CU.FT. = 138 TONS
MIDDS 6530 CU.FT. = 71 TONS
49% SOYBEAN MEAL 6530 CU.FT. = 140 TONS
CORN GLUTEN MEAL 6530 CU.FT. = 140 TONS
CHOLINE CHLORIDE 8,000 GAL.
FAT 7500 GAL. 27½ TONS
FAT 7500 GAL. 27½ TONS
TO FAT COATER
Incorporated
Minneapolis, Minnesota
FLOW DIAGRAM SHEET 1
NEW BROILER FEED PLANT
N79-1DF01
DESCRIPTION
REV.
DATE
BY
A
B
C
D
1
2
3
4

SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 113-79-02

December 19, 1979



Mr. Albert Henderson
Technical Services, Inc.
Post Office Box 52329
Jacksonville, FL 32201

Dear Albert:

In response to a telephone conversation with Marion DeGrove of the Duval County Bio-Environmental Services Division, I have rerun the CRSTER Air Quality Model for the Cargill feed plant. In rerunning the model I have forced the model to calculate the ground level impact of the sources with no plume rise (since stack temperatures are at ambient levels) and have further determined the maximum particulate matter emission rate possible without exceeding PSD increments.

The air quality models commonly used calculate a plume rise based on plume buoyancy. The buoyancy in turn is dependent upon the stack gas flow rate and stack gas temperature. For sources such as those proposed by Cargill there will be essentially no buoyancy plume rise since the plumes are at or slightly above ambient temperature. Incorporating this condition into air quality models necessitates using artificial conditions. This is necessary since the plume temperature must be greater than the greatest expected ambient temperature for the model to run. To assure that this condition exists, I normally assume a stack temperature of 315°K (108°F). In order to assure that this stack temperature will result in no plume rise, I artificially set the stack diameter to one meter and the stack gas velocity to one meter per second. This artificial condition results in a stack gas flow rate small enough to produce a negligible buoyant plume rise.

Since I used an artificial condition for stack diameter and stack gas velocity and temperature, and since all proposed sources have the same stack height, I was able to combine the five proposed sources into one common source for the purposes of modeling. This is reflected in the attached computer output.

To determine the maximum allowable emission rate without violating PSD increments I initially assumed a total emission rate for all sources of 23.0 pounds per hour (2.9 grams/second). This emission rate resulted in a maximum annual average impact of 1.4 ug/m^3, a maximum 24-hour impact

of 34.5 ug/m^3 and insignificant impacts for these time periods on the Jacksonville non-attainment area.

The 24-hour impact of 34.5 ug/m^3 approached closest to the allowable PSD increment. The allowable PSD increment over a 24-hour period is 37.0 ug/m^3. A maximum total particulate matter emission rate of 24.6 pounds per hour (3.1 grams/second) would result in a incremental impact of just under 37.0 ug/m^3. This emission rate; therefore, (24.6 pounds per hour) will be the maximum allowable particulate matter emission rate from the proposed facility.

An emission rate slightly higher than this might be shown to be satisfactory if additional modeling were to be conducted with air quality models such as the PTMTPW or the PAL. I would suggest that you contact your client and discuss the allocation of the 24.6 pounds per hour among the five proposed sources. If it is determined to be necessary to have a greater emission rate, contact me and I can conduct the additional modeling.

The attached computer output plus the information enclosed in this letter will have to be relayed to Marion DeGrove. I will leave the transmittal of the information to your discretion after discussing the matter with your client. If you have any questions, please feel free to give me a call.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS

John B. Koogler, Ph.D.,P.E.

JBK:sc
Enclosures

Best Available Copy

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FLANT NAME: TSI                                  FOLLUTANT: FAFT        EMISSION UNITS: GM/SEC     AIF QUALITY UNITS: GM/M**3
ANIMAL FEEI FLANT FOR TSI
SHOLTES & KOOGLEF ENVIRONMENTAL CONSULTANTS
NOVEMBER, 1979

                 MET FILE      FEQUESTEI
                 STN NO.  YF   STN NO.  YF
   SURFACE       93845    76   93845    76
   UFFER AIR     13861    76   13861    76
FLANT LOCATION: FURAL
NO TAFE OUTFUT
MET FATA WILL NOT BE FFINTEI

FAY-- 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1

  * * * * * * * * * * * * * * * * * * * * N O T E * * * * * * * * * * * * * * * * * * * *

        ALL TABLES, INCLUFING SOURCE CONTFIBUTION, THAT CONTAIN "ANNUAL" IN THE HEAFING AFE BASEI ONLY ON THOSE FAYS

        MAFKEI BY "1" IN THE ABOVE TABLE
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PLANT NAME: [illegible] POLLUTANT: TSP EMISSION UNITS: G/SEC AIR QUALITY UNITS: G/M**3

MAXIMUM MEAN CONC= 1.4439E-06 DIRECTION= 24 DISTANCE= 0.4 KM

YEAR= 76

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.2 KM	0.3 KM	0.4 KM	0.6 KM	20.0 KM
1	6.51128E-07	1.00140E-06	1.14578E-06	1.14850E-06	3.50527E-08
2	7.10367E-07	1.08498E-06	1.17937E-06	1.12954E-06	2.97399E-08
3	7.59466E-07	1.06601E-06	1.16269E-06	1.13511E-06	3.16695E-08
4	7.67375E-07	1.07393E-06	1.19307E-06	1.21514E-06	4.29374E-08
5	8.33281E-07	1.17044E-06	1.26641E-06	1.22563E-06	5.16473E-08
6	9.59953E-07	1.34146E-06	1.40854E-06	1.28293E-06	3.37630E-08
7	9.96729E-07	1.35232E-06	1.33637E-06	1.09710E-06	2.25306E-08
8	8.88073E-07	1.22853E-06	1.22173E-06	1.00314E-06	1.91112E-08
9	7.04907E-07	1.00200E-06	1.02033E-06	8.61031E-07	2.01463E-08
10	6.23351E-07	8.47550E-07	8.40173E-07	6.94405E-07	1.83009E-08
11	7.77012E-07	1.07725E-06	1.09138E-06	9.30501E-07	2.33401E-08
12	9.66340E-07	1.35113E-06	1.37980E-06	1.19473E-06	2.60744E-08
13	1.03492E-06	1.40965E-06	1.42028E-06	1.23947E-06	2.97809E-08
14	9.95142E-07	1.36022E-06	1.39251E-06	1.20506E-06	2.41007E-08
15	8.45729E-07	1.17421E-06	1.21720E-06	1.09343E-06	1.76333E-08
16	7.05737E-07	9.80533E-07	1.03568E-06	9.56617E-07	1.57952E-08
17	7.12254E-07	1.02844E-06	1.13321E-06	1.11976E-06	2.64561E-08
18	8.14643E-07	1.17220E-06	1.27066E-06	1.23010E-06	2.11565E-08
19	8.83340E-07	1.20172E-06	1.21769E-06	1.05351E-06	2.32795E-08
20	9.00228E-07	1.22031E-06	1.23912E-06	1.08017E-06	2.27449E-08
21	8.64803E-07	1.18429E-06	1.21609E-06	1.06345E-06	2.31705E-08
22	8.81846E-07	1.22944E-06	1.30794E-06	1.24555E-06	3.45372E-08
23	9.11167E-07	1.26978E-06	1.37467E-06	1.33301E-06	3.72015E-08
24	9.90005E-07	1.38452E-06	1.44892E-06	1.43402E-06	3.91208E-08
25	7.50274E-07	1.12463E-06	1.27166E-06	1.28489E-06	2.73150E-08
26	5.77221E-07	8.62644E-07	9.55844E-07	9.32167E-07	2.16388E-08
27	4.60790E-07	7.03533E-07	8.03197E-07	8.32960E-07	1.94100E-08
28	4.62248E-07	6.91212E-07	7.99156E-07	8.33297E-07	2.09252E-08
29	5.83458E-07	7.32110E-07	8.32712E-07	8.02262E-07	2.93129E-08
30	7.79602E-07	1.02219E-06	1.02139E-06	8.70655E-07	2.40311E-08
31	8.75534E-07	1.15403E-06	1.16033E-06	1.00081E-06	2.23937E-08
32	8.44230E-07	1.03351E-06	1.06674E-06	9.10940E-07	3.03323E-08
33	7.84093E-07	1.06943E-06	1.09777E-06	9.76805E-07	2.57554E-08
34	7.09760E-07	1.05620E-06	1.13164E-06	1.03925E-06	3.02868E-08
35	6.75899E-07	1.02920E-06	1.11363E-06	1.03513E-06	3.51968E-08
36	6.50139E-07	1.00185E-06	1.12027E-06	1.10322E-06	3.00078E-08

PLANT NAME: TSI POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

MAXIMUM 24-HOUR CONC = 3.4514E-05 DIRECTION= 20 DISTANCE= 0.3 KM DAY=249

HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

ANGLE	RANGE 0.2 KM	0.3 KM	0.4 KM	0.6 KM	20.0 KM
1	1.2240E-05 (227)	1.2184E-05 (227)	1.2630E-05 (139)	1.0721E-05 (139)	1.1286E-06 (359)
2	1.7360E-05 (227)	2.1405E-05 (227)	1.9335E-05 (227)	1.9022E-05 (35)	1.0708E-06 (185)
3	1.4378E-05 (262)	1.4007E-05 (223)	1.7352E-05 (35)	2.3333E-05 (35)	8.8501E-07 (183)
4	1.3179E-05 (140)	1.0323E-05 (173)	1.1609E-05 (173)	1.5154E-05 (134)	1.0458E-06 (191)
5	1.1496E-05 (263)	1.1106E-05 (263)	1.1081E-05 (163)	1.2845E-05 (163)	1.6228E-06 (201)
6	1.2991E-05 (224)	1.4076E-05 (147)	1.4301E-05 (151)	1.3033E-05 (151)	1.6472E-06 (239)
7	2.4787E-05 (246)	2.5221E-05 (246)	1.9114E-05 (246)	1.4185E-05 (168)	7.4010E-07 (186)
8	2.6315E-05 (151)	3.2483E-05 (151)	2.8048E-05 (151)	1.7528E-05 (151)	6.1113E-07 (209)
9	2.2960E-05 (151)	2.9344E-05 (151)	2.6742E-05 (151)	1.7662E-05 (151)	8.1989E-07 (114)
10	1.9480E-05 (193)	1.0276E-05 (133)	1.0257E-05 ([illegible])	8.3584E-06 (138)	6.2838E-07 (22)
11	1.9809E-05 (193)	1.9309E-05 (193)	1.4645E-05 (193)	1.0996E-05 (265)	1.0746E-06 (242)
12	2.4691E-05 (193)	2.7254E-05 (193)	2.2371E-05 (193)	1.4833E-05 (150)	7.7195E-07 (155)
13	2.9132E-05 (197)	2.6438E-05 (197)	1.9474E-05 (197)	1.0855E-05 (366)	6.2003E-07 (40)
14	2.5038E-05 (119)	1.9324E-05 (119)	2.0476E-05 (277)	1.9220E-05 (277)	3.4496E-07 (277)
15	2.0251E-05 (119)	1.6863E-05 (262)	1.4920E-05 (262)	1.4992E-05 (235)	4.6331E-07 (54)
16	1.2325E-05 (119)	1.4569E-05 (262)	1.2392E-05 (262)	1.1606E-05 (123)	3.2320E-07 (129)
17	1.5643E-05 (161)	1.3672E-05 (67)	1.3374E-05 (67)	1.1321E-05 (190)	7.6270E-07 (351)
18	1.8525E-05 (161)	1.6454E-05 (161)	2.1497E-05 (145)	2.2400E-05 (145)	1.0235E-06 (203)
19	1.6432E-05 (311)	2.5195E-05 (311)	2.3601E-05 (311)	1.6575E-05 (12)	1.0706E-06 (162)
20	2.2021E-05 (249)	3.4514E-05 (249)	3.3959E-05 (249)	2.5448E-05 (249)	6.1281E-07 (125)
21	1.4786E-05 (222)	1.6856E-05 (338)	1.7909E-05 (338)	1.4059E-05 (333)	1.3363E-06 (331)
22	1.6153E-05 (222)	1.8149E-05 (338)	1.6853E-05 (338)	1.4284E-05 (257)	8.1161E-07 (59)
23	2.0194E-05 (222)	2.0135E-05 (222)	1.5044E-05 (222)	1.4964E-05 (349)	1.2915E-06 (230)
24	2.3035E-05 (222)	2.5707E-05 (222)	2.0324E-05 (222)	1.4313E-05 (346)	9.2457E-07 (293)
25	1.4067E-05 (222)	1.7224E-05 (45)	1.7732E-05 (45)	1.9232E-05 (325)	9.6127E-07 (333)
26	9.0306E-06 (142)	1.2442E-05 (245)	1.2435E-05 (245)	1.0784E-05 (252)	6.4239E-07 (279)
27	9.4152E-06 (245)	1.4410E-05 (245)	1.3376E-05 (245)	9.7601E-06 (97)	9.3437E-07 (253)
28	6.4339E-06 (178)	1.0452E-05 (268)	1.1606E-05 (268)	1.0152E-05 (268)	3.7835E-07 (175)
29	1.3037E-05 (178)	1.4377E-05 (268)	1.5790E-05 (268)	1.5209E-05 (268)	6.0460E-07 (15)
30	1.5992E-05 (160)	1.6950E-05 (141)	1.4353E-05 (141)	9.4491E-06 (141)	6.5253E-07 (241)
31	1.9543E-05 (141)	1.8557E-05 (141)	1.9536E-05 (241)	1.3636E-05 (241)	1.0474E-06 (165)
32	1.5901E-05 (164)	1.7118E-05 (164)	1.6604E-05 (164)	1.4491E-05 (164)	1.5993E-06 (171)
33	1.3826E-05 (164)	1.5999E-05 (120)	1.8741E-05 (120)	1.7371E-05 (120)	7.8149E-07 (161)
34	1.2706E-05 (208)	1.3959E-05 (171)	1.3535E-05 (169)	1.2368E-05 (192)	1.0122E-06 (25)
35	8.8639E-06 (226)	1.2202E-05 (106)	1.2067E-05 (106)	1.6287E-05 (62)	9.3229E-07 (205)
36	9.3842E-06 (314)	1.2914E-05 (161)	1.1700E-05 (161)	1.0193E-05 (133)	6.5840E-07 (105)

RING DISTANCES(KM)= 0.20 0.30 0.50 0.60 20.00

STACK # 1--STACK NO.1 SOURCE NUMBER 1

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M**3/SEC)
1	ALL	2.9000	34.80	1.00	1.00	315.00	0.79

Cargill - New Feedmill

CONSTRUCTION: 112 Halsema Rd.

The application has been reveceived for completeness. A verbal request for a rerun of the CRSTR model has been received (see December 19, 1979 letter from Sholtes & Koogler) as the first run submitted ~~was~~ used data different from what was submitted on the applications. Additional information has been requested and received (see Wayne Jutt's letter of Dec. 31, 1979 and Younglove Const. Co.'s response of January 10, 1980). I have since written back to Younglove Const. Co. relating our intentions to deny the permit ~~as~~ unless the total emission rate is divided up among the five sources and the information submitted to this office by Feb. 15, 1980. Upon receipt of that information, I will immediately send it to your office.

E. P. Balducci

DER AIR PERMIT INVENTORY SYSTEM

POINT DATA

NAME: _____ DIST: __ CNTY: __ PLANT: ____

&LOC: _____ CITY: ___ ZIP: _____ OWNR: __ TYPE: __ # OF PNTS: __

POINT #: 011 TYPE: __ NUMBER OF SCC'S: __ NUMBER OF POLLUTANTS EMITTED: __

CONSTRUCT PATS: _____/__ #AC__-_____ OPERATE PATS: _____/__ #AO__-_____

ISS: _____ EXP: _____ INIT-CONST: _____ ISSUED: _____ EXPIRES: _____(YYMMDD)

DESCRIPTION: Grain Grinding System

(64 spaces maximum)

? IPP: __ NEW/EXIST: N NSPS: __ NESHAP: __ ECAP: __ COMMON POINTS: __-__

STACK HT: 114. DIAM: 1.7 TEMP: 168F FLOW: 13513CFM PLUME: ____, BLR-CAP: _____

OPERATING DATA: NORMAL CONDS. YOR: 80 DEC-FEB: 25% MAR-MAY: 25% JUN-AUG: 25% SEP-NOV: 25%

PERMITTED SCHEDULE HRS/DAY: 16 DAYS/WK: 5 WKS/YR: 52

OPS REPTD: _____(YYMMDD) HRS/DAY: __ DAYS/WK: __ WKS/YR: __

PROCESS RATES: RAW MATERIAL: 32 UNITS: 02 FUEL: _____ UNITS: __

PRODUCT: 31.09 UNITS: 03 SPACE HEAT: __.__%

POINT COMMENTS: _____

COMPLIANCE: NEDS: __ QRC: __ YR/MO: ____ SCHEDULED: ____(YYMM) UPDT: _____(YYMMDD)

PERMIT: __ YOR: __ INSPECTED: _____(YYMMDD) NEXT-INSP: _____(YYMMDD)

INSP-CMTS: _____

EDS: __/_____

DER Form PERM 12-7(b) (Jan 79)

DER AIR PERMIT INVENTORY SYSTEM

SCC DATA

NAME: _____ DIST: __ CNTY: __ PLANT: ____

&LOC: _____ CITY: ____ ZIP: _____ OWNR: __ TYPE: __ # OF PNTS: __

POINT #: __ TYPE: __ NUMBER OF SCC'S: __ NUMBER OF POLLUTANTS EMITTED: __

CONSTRUCT PATS: _____/__ #AC 16-216084 OPERATE PATS: _____/__ #AO __-_____

ISSUED: 810418 07 EXPIRES: 810731 (YYMMDD) ISSUED: _____ EXPIRES: _____ (YYMMDD)

SCC: 3012010805 RATE/YR: 16516 UNITS: 12 YOR: 80 MAX/HR: 132.01 SOURCE: P

FUEL CONTENT SULFUR: __.__% ASH: __.__% MBTU: _____ FUEL YOR: __ CONFID: 2

CMTS: _____ (64 spaces maximum)

SCC: _____ RATE/YR: _____ UNITS: __ YDR: __ MAX/HR: ____.01 SOURCE: __

FUEL CONTENT SULFUR: __.__% ASH: __.__% MBTU: _____ FUEL YOR: __ CONFID: __

CMTS: _____ (64 spaces maximum)

SCC: _____ RATE/YR: _____ UNITS: __ YDR: __ MAX/HR: ____.___ SOURCE: __

FUEL CONTENT SULFUR: __.__% ASH: __.__% MBTU: _____ FUEL YOR: __ CONFID: __

CMTS: _____ (64 spaces maximum)

SCC: _____ RATE/YR: _____ UNITS: __ YRD: __ MAX/HR: ____.___ SOURCE: __

FUEL CONTENT SULFUR: __.__% ASH: __.__% MBTU: _____ FUEL YOR: __ CONFID: __

CMTS: _____ (64 spaces maximum)

DER Form PERM 12-7(c) (Nov 78)

DER AIR PERMIT INVENTORY SYSTEM

POLLUTANT DATA

NAME: ______ DIST: __ CNTY: __ PLANT: ____

&LOC: ______ CITY: ____ ZIP: _____ OWNR: _ TYPE: __ # OF PNTS: __

POINT #: __ TYPE: _ NUMBER OF SCC'S: __ NUMBER OF POLLUTANTS EMITTED: __

CONSTRUCT PATS: ______/__ #AC 16-26084 OPERATE PATS: ______/__ #AO __-_____

ISSUED: 800407 EXPIRES: 810731 (YYMMDD) ISSUED: ______ EXPIRES: ______ (YYMMDD)

POLLUTANT:

1. TSP #: 11101 NORMAL: ____.12 ESTIMATED/METH: ___0.187/2 MAXIMUM: ____.187

PRI: 17 SEC: ___ EFF: 99.0% NXT-TST: ______ (YYMMDD) FREQ: 1 REG: ______

2. ___#: _____ NORMAL: _____.__ ESTIMATED/METH: ________/__ MAXIMUM: _______

PRI: ___ SEC: ___ EFF: __.__% NXT-TST: ______ (YYMMDD) FREQ: __ REG: ______

3. ___#: _____ NORMAL: _____.__ ESTIMATED/METH: ________/__ MAXIMUM: _______

PRI: ___ SEC: ___ EFF: __.__% NXT-TST: ______ (YYMMDD) FREQ: __ REG: ______

4. ___#: _____ NORMAL: _____.__ ESTIMATED/METH: ________/__ MAXIMUM: _______

PRI: ___ SEC: ___ EFF: __.__% NXT-TST: ______ (YYMMDD) FREQ: __ REG: ______

5. ___#: _____ NORMAL: _____.__ ESTIMATED/METH: ________/__ MAXIMUM: _______

PRI: ___ SEC: ___ EFF: __.__% NXT-TST: ______ (YYMMDD) FREQ: __ REG: ______

6. ___#: _____ NORMAL: _____.__ ESTIMATED/METH: ________/__ MAXIMUM: _______

PRI: ___ SEC: ___ EFF: __.__% NXT-TST: ______ (YYMMDD) FREQ: __ REG: ______

DER AIR PERMIT INVENTORY SYSTEM

TEST DATA

NAME: _____ DIST: __ CNTY: __ PLANT: ____

&LOC: _____ CITY: ____ ZIP: _____ OWNR: __ TYPE: __ # OF PNTS: __

POINT #: __ TYPE: __ NUMBER OF SCC'S: __ NUMBER OF POLLUTANTS EMITTED: __

CONSTRUCT PATS: _____/__ #AC__-_____ OPERATE PATS: _____/__ #AO__-_____

ISSUED: _____ EXPIRES: _____(YYMMDD) ISSUED: _____ EXPIRES: _____(YYMMDD)

POLLUTANT: RATES ARE LBS/HR

__#:_____ NORMAL: _____.__ ESTIMATED/METH: _____/__ MAXIMUM: _____

PRI: ___ SEC: ___ EFF: __.__% NXT-TST: _____(YYMMDD) FREQ: __ REG: _____

LAST-TEST: _____(YYMMDD) TEST-AGENCY: __ REGULATION: _____ COMPLIANCE: __

EMITTED: _____.__ OP-RATE/UNITS: _____/__ TEST-ALLOW: _____.__

CURR-TEST: _____(YYMMDD) TEST-AGENCY: __ REGULATION: _____ COMPLIANCE: __

EMITTED: _____.__ OP-RATE/UNITS: _____/__ TEST-ALLOW: _____.__

DER Form PERM 12-7(e) (Jul 79)

DER AIR PERMIT INVENTORY SYSTEM

PLANT DATA

NAME: CARGILL INC DIST: 31 CNTY: 116 PLANT:

&LOC: 12 HARBOR RD CITY: 19610 ZIP: OWNR: P TYPE: 99 # OF PNTS: 05

CONTACT: BOB WELLMAN ADDR: P O BOX 9300

CITY: MINNEAPOLIS ST: MN ZIP: 55440

AQCR: 49 SIC: 2041

LAT: 30:18:20 LON: 81:52:30

UTM ZONE: 17 EAST: 416.0 NORTH: 3350.0

COMMENTS: GRAIN GRINDING AND STORAGE FACILITY

DER Form PERM 12-7(a) (Nov 78)

Younglove Construction Co

2015 E. SEVENTH P.O. BOX 1768 SIOUX CITY, IOWA 51102 TELEPHONE 712/277-3901

December 7, 1979

Department of Bio-Environmental Services
515 West 6th Street
Jacksonville, Florida 32206

Attention: Marion DeGrove

Re: Air Pollution Control
Permit Applications
for New Feedmill at
112 Halsema Road

Dear Mrs. DeGrove:

We have enclosed 4 copies plus the originals for each of the five air pollution control permit applications for the new Cargill Feedmill under construction at 112 Halsema Road, in Jacksonville, Florida. We have also enclosed a check for $100.00 made out to the State of Florida Department of Environmental Regulation. Mr. Albert Henderson of Technical Services, our computer modeling consultant, will forward to you under separate cover the results of the CRSTER computer model run for this project. If you desire additional information, please contact us.

We would prefer to be contacted by phone for any additional information which you may want, as that would help speel-up the review process. We plan to be in Jacksonville within the next couple of weeks and would be more than happy to meet with you regarding these applications. Please advise us if you think a meeting would be beneficial.

Younglove Construction Company and Cargill Inc. appreciate the assistance your office provided during our visits of August 17, and October 10 of this year. We would also appreciate receiving a copy of your department's transmittal when you forward the applications to the State of Florida Environmental Regulation.

Thank you for your cooperation.

Sincerely,

Younglove Construction Company

William L. Bradbury

William L. Bradbury, P.E.

cc: Roger Sprock
Bob Ambler

WLB:neh

JOHN SVEC

CARGILL –

NEW FEEDMILL.

5 APPLICATIONS, 4 COPIES EACH.

COVER LETTER, NEXT, TELLS BETTER PART OF STORY.

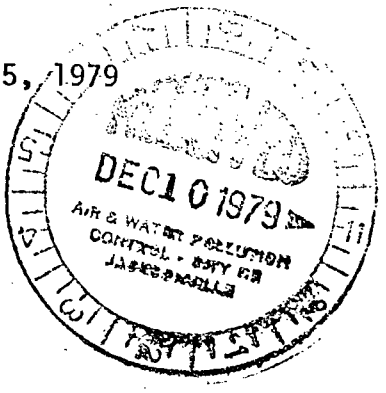
CARGILL
BEGIN 90 DAY ON 14 JAN 1980

M.C.H.

SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 113-79-01

December 5, 1979



Mr. Albert Henderson
Technical Services, Inc.
Post Office Box 52329
Jacksonville, FL 32201

Dear Albert:

Attached is the CRSTER output for the animal feed plant that will be located in Whitehouse.

In making this run I used the emission data for the five (5) sources that you provided. I input the data for the pellet system as a single source and combined the emissions from the other four sources since they were similar in nature.

The model predicts a maximum annual impact of 1.6 ug/m^3 at a distance of 0.6 km from the source. This assumes that the plant will operate 100% of the time during the year. The maximum annual impact on the non-attainment area in downtown Jacksonville was 0.07 ug/m^3; again assuming the plant operates 100% of the time. A significant impact, as defined by Chapter 17-2.17 of the Florida Administrative Code, is 1.0 ug/m^3 annual average. It can be concluded; therefore, that the proposed source will not have a significant annual average impact on the non-attainment area.

The maximum expected 24-hour impact of the proposed source is 27.7 ug/m^3 at a distance of 0.6 km from the source. The maximum 24-hour impact on the non-attainment area is 2.3 ug/m^3. This is less than the level of significance of 5.0 ug/m^3 as defined by Chapter 17-2.17 of the Florida Administrative Code. In both cases the assumption is made that the plant operates 24 hours per day.

It should also be pointed out that the maximum annual and maximum 24-hour impacts are less than the impacts permitted by the state and federal PSD regulations. The annual and 24-hour impacts permitted by these regulations are 19 and 38 ug/m^3 respectively.

For your review, I have also attached the results of the PTMAX model run that I made. In my opinion, this output is of little value in evaluating the impact of the proposed source on ambient air quality.

If you have any questions regarding this information, please give me a call.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS

John B. Koogler, Ph.D., P.E.

JBK:sc
Enclosure

CONSOLIDATED CITY OF JACKSONVILLE, FLORIDA

OFFICE MEMO

DATE _____

- TO
- FROM
- SUBJECT

CRSTER –

Cargill

Problem areas

Stack #1 - Pelletizing

10.85 #/hr	Permit	85°
15.0 #/hr	CRSTER	108°

Stack #2 - Others

.628 #/hr	57.18 ft/s	75°
20 #/hr	69.94	108°

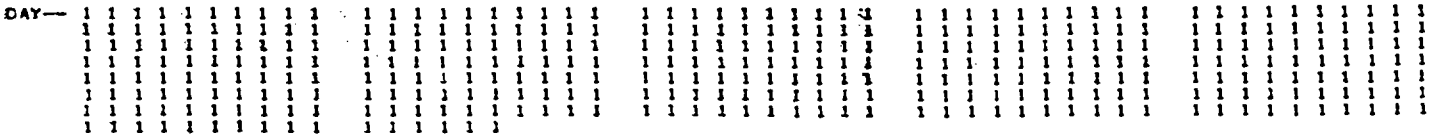
Call to Harvey Gray - 12/13/79

☐ REPLY REQUESTED

PLANT NAME: TSI POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3
ANIMAL FEED PLANT FOR TSI
SHOLTES & KOOGLER ENVIRONMENTAL CONSULTANTS
NOVEMBER, 1979

	MET FILE STN NO.	YR	REQUESTED STN NO.	YR
SURFACE	93845	76	93845	76
UPPER AIR	13861	76	13861	76

PLANT LOCATION: RURAL
NO TAPE OUTPUT
MET DATA WILL NOT BE PRINTED



* NOTE *

ALL TABLES, INCLUDING SOURCE CONTRIBUTION, THAT CONTAIN "ANNUAL" IN THE HEADING ARE BASED ONLY ON THOSE DAYS MARKED BY "1" IN THE ABOVE TABLE

RING DISTANCES(KM)= 0.60 0.80 1.00 1.20 20.00

STACK # 1—STACK NO 1 SOURCE NUMBER 1
STACK # 2—STACK NO 2 SOURCE NUMBER 2

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M**3/SEC)
1	ALL	1.8900	34.80	1.10	18.70	315.00	17.77
2	ALL	2.5200	34.80	0.38	20.70	315.00	2.35

PLANT NAME: TSI POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 1.6139E-06 DIRECTION= 24 DISTANCE= 0.6 KM

MAX ANNUAL 1.6 mg/m³

YEAR= 76

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR

DIR	RANGE	0.6 KM	0.8 KM	1.0 KM	1.2 KM	20.0 KM
1		1.28440E-06	1.17641E-06	1.03692E-06	8.99645E-07	4.86627E-08
2		1.26964E-06	1.13506E-06	9.81459E-07	8.39089E-07	4.17112E-08
3		1.29638E-06	1.17480E-06	1.03314E-06	8.95440E-07	4.40854E-08
4		1.40711E-06	1.29527E-06	1.14739E-06	9.99148E-07	5.88054E-08
5		1.41973E-06	1.27119E-06	1.11885E-06	9.76643E-07	6.74438E-08
6		1.51031E-06	1.31381E-06	1.13237E-06	9.71801E-07	5.14899E-08
7		1.31894E-06	1.08183E-06	9.95721E-07	7.48760E-07	3.19033E-08
8		1.20167E-06	9.82177E-07	8.05508E-07	6.66069E-07	2.56812E-08
9		1.03590E-06	8.60143E-07	7.11695E-07	5.92262E-07	2.83663E-08
10		8.43983E-07	6.89246E-07	5.66902E-07	4.71357E-07	2.54605E-08
11		1.11434E-06	9.29705E-07	7.75881E-07	6.51155E-07	3.22628E-08
12		1.39604E-06	1.17123E-06	9.80020E-07	8.21734E-07	3.63213E-08
13		1.44552E-06	1.21821E-06	1.01977E-06	8.52954E-07	3.22187E-08
14		1.41488E-06	1.19372E-06	9.97787E-07	8.33975E-07	3.42072E-08
15		1.26842E-06	1.09476E-06	9.27203E-07	7.79984E-07	2.49721E-08
16		1.07608E-06	9.45878E-07	8.11945E-07	6.88833E-07	2.26743E-08
17		1.22545E-06	1.12026E-06	9.85356E-07	8.49449E-07	3.66326E-08
18		1.34761E-06	1.21185E-06	1.04938E-06	8.92245E-07	2.66292E-08
19		1.18946E-06	1.01302E-06	8.55121E-07	7.20347E-07	3.08714E-08
20		1.21536E-06	1.04085E-06	8.83646E-07	7.48105E-07	3.22597E-08
21		1.24682E-06	1.06861E-06	8.98958E-07	7.53408E-07	3.26810E-08
22		1.44377E-06	1.29639E-06	1.12778E-06	9.69053E-07	4.84325E-08
23		1.55084E-06	1.40665E-06	1.22989E-06	1.05967E-06	5.27421E-08
24		1.61392E-06	1.46724E-06	1.28270E-06	1.10231E-06	5.23383E-08
25		1.42187E-06	1.30437E-06	1.14234E-06	9.79730E-07	3.83751E-08
26		1.05915E-06	9.57492E-07	8.35236E-07	7.17406E-07	3.10464E-08
27		9.12916E-07	8.48647E-07	7.51923E-07	6.50420E-07	2.79110E-08
28		9.05741E-07	8.51117E-07	7.62183E-07	6.65357E-07	2.97828E-08
29		8.74209E-07	7.92634E-07	7.08058E-07	6.23926E-07	4.10872E-08
30		9.99204E-07	8.43415E-07	7.17337E-07	6.11845E-07	3.39048E-08
31		1.12420E-06	9.54436E-07	8.10749E-07	6.88174E-07	3.07047E-08
32		1.01215E-06	8.58391E-07	7.42808E-07	6.46474E-07	5.44072E-08
33		1.09293E-06	9.45776E-07	8.16564E-07	7.02365E-07	3.65103E-08
34		1.15574E-06	1.01720E-06	8.81206E-07	7.58654E-07	4.25867E-08
35		1.14965E-06	1.01356E-06	8.81448E-07	7.63467E-07	4.94219E-08
36		1.24426E-06	1.12672E-06	9.85789E-07	8.50870E-07	4.24413E-08

MAX ANNUAL IMPACT AT NON-ATTAINMENT AREA = 0.07 mg/m³

(Significant Impact Chapter 17-2.17 FAC is 1 mg/m³)

PLANT NAME: TSI POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY MAXIMUM 24-HOUR CONC= 2.7734E-05 DIRECTION= 20 DISTANCE= 0.6 KM DAY=249

Max 24-Hr 27.7 mg/m³

YEAR= 76

HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

RANGE DIR	0.6 KM	0.8 KM	1.0 KM	1.2 KM	20.0 KM
1	1.1504E-05 (189)	1.0370E-05 (122)	9.0502E-06 (122)	7.7935E-06 (325)	1.5130E-06 (358)
2	1.7636E-05 (35)	1.6844E-05 (35)	1.4939E-05 (35)	1.2820E-05 (35)	1.4011E-06 (185)
3	2.0344E-05 (35)	2.1801E-05 (35)	2.0503E-05 (35)	1.8078E-05 (35)	9.7558E-07 (127)
4	1.2686E-05 (173)	1.2732E-05 (134)	1.3454E-05 (134)	1.2697E-05 (134)	1.3104E-06 (116)
5	1.2099E-05 (152)	1.2846E-05 (50)	1.2236E-05 (50)	1.0941E-05 (50)	2.1390E-06 (354)
6	1.3507E-05 (194)	1.2111E-05 (194)	1.0842E-05 (194)	9.9155E-06 (289)	2.2710E-06 (289)
7	1.6084E-05 (168)	1.2780E-05 (168)	1.1091E-05 (354)	1.0278E-05 (354)	9.9930E-07 (186)
8	2.1543E-05 (151)	1.4958E-05 (151)	1.0718E-05 (151)	7.9674E-06 (151)	8.0289E-07 (209)
9	2.1461E-05 (151)	1.5523E-05 (151)	1.1498E-05 (151)	8.8481E-06 (151)	1.0983E-06 (114)
10	9.5842E-06 (138)	8.2924E-06 (138)	6.9481E-06 (138)	5.7420E-06 (179)	8.2723E-07 (22)
11	1.0555E-05 (193)	9.7357E-06 (265)	9.4627E-06 (265)	8.7781E-06 (265)	1.4582E-06 (242)
12	1.7907E-05 (193)	1.3035E-05 (150)	1.1659E-05 (150)	1.0300E-05 (150)	1.0496E-06 (155)
13	1.4305E-05 (197)	1.2052E-05 (366)	1.2006E-05 (366)	1.0992E-05 (366)	8.2642E-07 (169)
14	1.9159E-05 (277)	1.7076E-05 (277)	1.5086E-05 (277)	1.3277E-05 (277)	1.1533E-06 (277)
15	1.3673E-05 (235)	1.4353E-05 (235)	1.3763E-05 (235)	1.2541E-05 (235)	6.1633E-07 (54)
16	1.2886E-05 (323)	1.1640E-05 (323)	9.8717E-06 (323)	8.5205E-06 (123)	4.6525E-07 (28)
17	1.3291E-05 (67)	1.1907E-05 (258)	1.1133E-05 (258)	9.9823E-06 (351)	7.9793E-07 (350)
18	2.1405E-05 (145)	2.0489E-05 (145)	1.7869E-05 (145)	1.5090E-05 (145)	6.8018E-07 (324)
19	1.6445E-05 (311)	1.3126E-05 (12)	1.0673E-05 (12)	8.6231E-06 (12)	1.0460E-06 (162)
20	2.7734E-05 (249)	2.1937E-05 (249)	1.7252E-05 (249)	1.3709E-05 (249)	8.1277E-07 (125)
21	1.3453E-05 (338)	1.3629E-05 (233)	1.2586E-05 (233)	1.0953E-05 (233)	1.8006E-06 (331)
22	1.5766E-05 (257)	1.6900E-05 (257)	1.5528E-05 (257)	1.3514E-05 (257)	1.0424E-06 (59)
23	1.5182E-05 (349)	1.7893E-05 (349)	1.7373E-05 (349)	1.5643E-05 (349)	1.7776E-06 (230)
24	1.5470E-05 (222)	1.4139E-05 (345)	1.4665E-05 (345)	1.3523E-05 (345)	1.1942E-06 (299)
25	1.5051E-05 (45)	1.5753E-05 (251)	1.6056E-05 (325)	1.5321E-05 (325)	1.2566E-06 (338)
26	1.2305E-05 (245)	1.1681E-05 (252)	1.1124E-05 (252)	1.0150E-05 (252)	8.7280E-07 (279)
27	1.1685E-05 (245)	1.0614E-05 (97)	1.0934E-05 (97)	1.0244E-05 (97)	1.2705E-06 (253)
28	1.2220E-05 (268)	1.0516E-05 (217)	9.9077E-06 (217)	8.8570E-06 (217)	5.2088E-07 (175)
29	1.5450E-05 (268)	1.3638E-05 (268)	1.1709E-05 (268)	1.0170E-05 (273)	8.4714E-07 (226)
30	1.1781E-05 (141)	9.8795E-06 (104)	8.9446E-06 (104)	7.7209E-06 (104)	8.5857E-07 (241)
31	1.9837E-05 (241)	1.7326E-05 (241)	1.4853E-05 (346)	1.3843E-05 (346)	1.0592E-06 (165)
32	1.3624E-05 (164)	1.2023E-05 (164)	1.0669E-05 (164)	9.3683E-06 (164)	2.1299E-06 (171)
33	1.9020E-05 (120)	1.6855E-05 (120)	1.4180E-05 (120)	1.1737E-05 (120)	1.0980E-06 (161)
34	1.1780E-05 (215)	1.2091E-05 (215)	1.0910E-05 (215)	9.5492E-06 (268)	1.3210E-06 (25)
35	1.3629E-05 (270)	1.3323E-05 (270)	1.2559E-05 (62)	1.2017E-05 (62)	1.2186E-06 (205)
36	1.1282E-05 (270)	1.0443E-05 (270)	8.8797E-06 (270)	8.2605E-06 (138)	8.5859E-07 (105)

MAX 24-HR IMPACT AT NON-ATTAINMENT AREA 2.3 mg/m³ (Significant Impact of 17-2.17 FAC = 5 mg/m³)

PLANT NAME: TSI POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 1.9799E-05 DIRECTION= 3 DISTANCE= 0.8 KM DAY=220

YEAR= 76

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.6 KM	0.8 KM	1.0 KM	1.2 KM	20.0 KM
1	1.0597E-05 (122)	9.4738E-06 (189)	8.1883E-06 (325)	7.6174E-06 (122)	1.1425E-06 (215)
2	1.4935E-05 (227)	1.2781E-05 (189)	1.0996E-05 (189)	9.2869E-06 (189)	7.5616E-07 (141)
3	1.7991E-05 (220)	1.9799E-05 (220)	1.8856E-05 (220)	1.6802E-05 (220)	9.5876E-07 (183)
4	1.0142E-05 (347)	1.1530E-05 (347)	1.0820E-05 (347)	9.4837E-06 (347)	1.0808E-06 (272)
5	1.1395E-05 (50)	1.1016E-05 (163)	1.0590E-05 (163)	9.7402E-06 (163)	1.3206E-06 (329)
6	1.2734E-05 (151)	1.1317E-05 (151)	1.0364E-05 (289)	9.5534E-06 (194)	8.6713E-07 (259)
7	1.4900E-05 (151)	1.1338E-05 (354)	9.9150E-06 (168)	7.7691E-06 (168)	8.0068E-07 (337)
8	1.5574E-05 (246)	1.0148E-05 (212)	8.1160E-06 (37)	7.2106E-06 (37)	5.5487E-07 (208)
9	1.3877E-05 (229)	1.0946E-05 (229)	8.4828E-06 (229)	6.6477E-06 (229)	9.5986E-07 (117)
10	8.4992E-06 (132)	6.8433E-06 (210)	5.4658E-06 (210)	4.4913E-06 (123)	7.2454E-07 (352)
11	9.5377E-06 (195)	8.9554E-06 (259)	8.9776E-06 (259)	8.3588E-06 (259)	1.0897E-06 (63)
12	1.6287E-05 (197)	1.1727E-05 (193)	8.3954E-06 (197)	7.4249E-06 (324)	8.9156E-07 (73)
13	1.3573E-05 (246)	1.0723E-05 (198)	8.7693E-06 (198)	7.6862E-06 (17)	8.0719E-07 (40)
14	1.2127E-05 (222)	1.0294E-05 (222)	9.4605E-06 (326)	9.2370E-06 (326)	7.5425E-07 (300)
15	1.3221E-05 (203)	1.3443E-05 (283)	1.2660E-05 (283)	1.1314E-05 (283)	5.2664E-07 (235)
16	1.2204E-05 (190)	1.1229E-05 (190)	9.5115E-06 (123)	8.1963E-06 (323)	4.3947E-07 (129)
17	1.1566E-05 (190)	1.1616E-05 (313)	1.0890E-05 (313)	9.7469E-06 (259)	7.5176E-07 (351)
18	1.6272E-05 (67)	1.4658E-05 (67)	1.2916E-05 (320)	1.1459E-05 (320)	5.3569E-07 (4)
19	1.5545E-05 (12)	1.2371E-05 (311)	9.3131E-06 (311)	7.7787E-06 (346)	7.1371E-07 (285)
20	1.3124E-05 (12)	1.4169E-05 (233)	1.3143E-05 (233)	1.1432E-05 (233)	6.7360E-07 (15)
21	1.2373E-05 (233)	1.1326E-05 (338)	9.2852E-06 (338)	8.0573E-06 (6)	9.0744E-07 (286)
22	1.4220E-05 (242)	1.2260E-05 (130)	1.1552E-05 (130)	1.0134E-05 (130)	9.7315E-07 (118)
23	1.2464E-05 (292)	1.3484E-05 (292)	1.2299E-05 (292)	1.0605E-05 (292)	8.2990E-07 (159)
24	1.3660E-05 (219)	1.3237E-05 (346)	1.3669E-05 (346)	1.2694E-05 (346)	9.5776E-07 (298)
25	1.4813E-05 (251)	1.5597E-05 (268)	1.5851E-05 (268)	1.4675E-05 (268)	6.1210E-07 (325)
26	1.1283E-05 (252)	9.7576E-06 (341)	9.3563E-06 (341)	8.2922E-06 (341)	7.2240E-07 (86)
27	9.5459E-06 (55)	9.0276E-06 (147)	8.6223E-06 (269)	7.9026E-06 (269)	9.0902E-07 (80)
28	1.0083E-05 (217)	1.0316E-05 (268)	9.1597E-06 (267)	7.9870E-06 (267)	4.7145E-07 (165)
29	1.0493E-05 (273)	1.1429E-05 (273)	1.1117E-05 (273)	9.8814E-06 (268)	7.6873E-07 (15)
30	1.0077E-05 (205)	8.2574E-06 (239)	7.2991E-06 (239)	6.1931E-06 (239)	7.9049E-07 (142)
31	1.1304E-05 (205)	1.4295E-05 (346)	1.4670E-05 (241)	1.2989E-05 (249)	7.3632E-07 (44)
32	1.0966E-05 (104)	9.2592E-06 (89)	8.5127E-06 (89)	7.4505E-06 (89)	9.8045E-07 (262)
33	1.6149E-05 (178)	1.4444E-05 (178)	1.3053E-05 (178)	1.1669E-05 (178)	9.1237E-07 (105)
34	1.1686E-05 (269)	1.0547E-05 (192)	1.0182E-05 (268)	9.3709E-06 (215)	8.5543E-07 (172)
35	1.1577E-05 (136)	1.2609E-05 (136)	1.1902E-05 (270)	1.0299E-05 (270)	8.9879E-07 (47)
36	1.0019E-05 (161)	8.4376E-06 (333)	8.8192E-06 (138)	7.3678E-06 (270)	8.4097E-07 (141)

PLANT NAME: TSI POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY MAXIMUM 3-HOUR CONC= 1.1571E-04 DIRECTION= 3 DISTANCE= 0.8 KM DAY=220 TIME PERIOD= 7

YEAR= 76

RANGE DIR	HIGHEST 0.6 KM	3-HOUR CONCENTRATION AT EACH RECEPTOR 0.8 KM	1.0 KM	1.2 KM	20.0 KM
1	6.9967E-05 (189, 3)	6.1634E-05 (170, 7)	6.5506E-05 (325, 2)	6.2348E-05 (325, 2)	7.6205E-06 (239, 8)
2	1.0213E-04 (227, 3)	8.7035E-05 (227, 3)	7.1357E-05 (227, 3)	5.6395E-05 (141, 7)	1.1183E-05 (185, 1)
3	1.0694E-04 (220, 7)	1.1571E-04 (220, 7)	1.1032E-04 (220, 7)	9.8592E-05 (220, 7)	7.8046E-06 (127, 7)
4	4.8552E-05 (61, 5)	6.2926E-05 (134, 2)	6.6840E-05 (134, 2)	6.3292E-05 (134, 2)	8.3542E-06 (116, 2)
5	8.5227E-05 (163, 3)	8.8116E-05 (163, 3)	8.4661E-05 (163, 3)	7.7752E-05 (163, 3)	9.4484E-06 (193, 2)
6	6.4175E-05 (151, 7)	6.4392E-05 (151, 7)	6.1960E-05 (151, 7)	5.7605E-05 (151, 7)	9.4295E-06 (289, 3)
7	1.1444E-04 (168, 6)	8.8415E-05 (354, 6)	8.2800E-05 (354, 6)	7.3251E-05 (354, 6)	6.5830E-06 (186, 7)
8	1.0128E-04 (151, 5)	7.2416E-05 (151, 5)	5.2599E-05 (151, 5)	4.0107E-05 (254, 6)	6.3844E-06 (209, 1)
9	9.8670E-05 (229, 4)	7.3809E-05 (229, 4)	5.5117E-05 (229, 4)	4.2123E-05 (229, 4)	6.1357E-06 (114, 8)
10	5.7805E-05 (208, 3)	4.6737E-05 (210, 3)	3.8560E-05 (210, 3)	3.1484E-05 (210, 3)	6.6072E-06 (22, 1)
11	7.0922E-05 (103, 6)	5.6993E-05 (103, 6)	4.6741E-05 (265, 1)	4.7732E-05 (265, 1)	8.3838E-06 (63, 7)
12	7.7931E-05 (276, 6)	6.8714E-05 (150, 7)	6.7906E-05 (150, 7)	6.3567E-05 (150, 7)	8.3060E-06 (155, 7)
13	1.0816E-04 (246, 4)	7.8596E-05 (246, 4)	5.8842E-05 (169, 3)	5.0353E-05 (169, 3)	6.2296E-06 (261, 3)
14	8.1614E-05 (277, 6)	6.5360E-05 (277, 6)	5.2473E-05 (326, 2)	4.9814E-05 (326, 2)	8.6470E-06 (277, 7)
15	7.7003E-05 (262, 4)	7.9847E-05 (235, 7)	7.8422E-05 (235, 7)	7.2953E-05 (235, 7)	3.7090E-06 (163, 7)
16	4.6038E-05 (1, 4)	5.7853E-05 (81, 8)	6.4383E-05 (81, 8)	6.3376E-05 (81, 8)	3.4783E-06 (81, 8)
17	8.6726E-05 (242, 6)	6.7303E-05 (242, 6)	6.8009E-05 (351, 3)	6.5915E-05 (351, 3)	6.2007E-06 (359, 1)
18	8.7335E-05 (12, 3)	7.8554E-05 (12, 3)	6.6969E-05 (12, 3)	6.0813E-05 (129, 2)	5.2139E-06 (324, 3)
19	7.7003E-05 (311, 6)	6.1663E-05 (311, 6)	4.8164E-05 (311, 6)	3.8900E-05 (88, 2)	5.7852E-06 (162, 2)
20	8.7844E-05 (12, 6)	8.5090E-05 (12, 6)	7.6373E-05 (12, 6)	6.6197E-05 (12, 6)	6.1518E-06 (125, 7)
21	6.5080E-05 (359, 5)	5.2655E-05 (338, 4)	4.6619E-05 (338, 4)	3.9800E-05 (338, 4)	7.2598E-06 (331, 2)
22	7.2866E-05 (245, 6)	5.8498E-05 (245, 6)	4.5507E-05 (245, 6)	3.9402E-05 (268, 8)	7.3685E-06 (118, 7)
23	6.9560E-05 (236, 5)	4.4720E-05 (236, 5)	3.3067E-05 (340, 5)	2.9129E-05 (340, 5)	9.5519E-06 (230, 2)
24	1.0502E-04 (222, 6)	7.4927E-05 (346, 4)	7.8190E-05 (346, 4)	7.3208E-05 (346, 4)	9.5536E-06 (299, 1)
25	7.2509E-05 (222, 6)	9.2676E-05 (268, 3)	9.8939E-05 (268, 3)	9.3942E-05 (268, 3)	7.7336E-06 (338, 7)
26	5.0992E-05 (252, 5)	4.8360E-05 (161, 7)	4.5064E-05 (161, 7)	4.0889E-05 (161, 7)	4.0756E-06 (279, 2)
27	6.7100E-05 (224, 3)	6.1776E-05 (224, 3)	5.8916E-05 (147, 3)	5.3780E-05 (147, 3)	9.5916E-06 (253, 2)
28	5.7793E-05 (268, 6)	5.2980E-05 (331, 5)	5.5284E-05 (331, 5)	5.1654E-05 (331, 5)	3.5649E-06 (224, 8)
29	6.6829E-05 (268, 5)	7.3743E-05 (149, 2)	7.8048E-05 (149, 2)	7.3620E-05 (149, 2)	5.8552E-06 (15, 8)
30	5.8656E-05 (330, 5)	5.3662E-05 (85, 5)	4.6865E-05 (85, 5)	3.9583E-05 (85, 5)	6.3427E-06 (142, 8)
31	8.1328E-05 (241, 6)	7.0681E-05 (113, 4)	7.3280E-05 (346, 8)	6.9692E-05 (346, 8)	5.8906E-06 (44, 3)
32	8.4148E-05 (164, 3)	8.5291E-05 (164, 3)	7.9238E-05 (164, 3)	7.0310E-05 (164, 3)	7.7541E-06 (262, 7)
33	7.9569E-05 (109, 6)	6.8671E-05 (178, 7)	6.6450E-05 (178, 7)	6.1131E-05 (178, 7)	7.0832E-06 (105, 1)
34	9.2995E-05 (269, 5)	8.3656E-05 (192, 3)	7.7680E-05 (192, 3)	6.8888E-05 (192, 3)	8.1463E-06 (25, 1)
35	7.9519E-05 (298, 6)	8.3882E-05 (298, 6)	7.8471E-05 (298, 6)	6.9340E-05 (298, 6)	9.7443E-06 (205, 1)
36	8.0155E-05 (161, 6)	6.7096E-05 (138, 2)	7.0394E-05 (138, 2)	6.6003E-05 (138, 2)	6.8417E-06 (105, 2)

PLANT NAME: TSI POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 3-HOUR CONC= 9.2905E-05 DIRECTION= 25 DISTANCE= 1.0 KM DAY=325 TIME PERIOD= 7

YEAR= 76

SECOND HIGHEST 3-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 0.6 KM	0.8 KM	1.0 KM	1.2 KM	20.0 KM
1	6.1743E-05 (316, 4)	6.0903E-05 (325, 2)	5.7251E-05 (170, 7)	5.0518E-05 (170, 7)	7.1674E-06 (55, 3)
2	7.8386E-05 (35, 6)	6.9147E-05 (35, 6)	6.2253E-05 (141, 7)	5.8071E-05 (227, 3)	5.1005E-06 (311, 7)
3	6.9252E-05 (223, 5)	5.7908E-05 (347, 1)	6.1975E-05 (347, 1)	5.8967E-05 (347, 1)	6.0452E-06 (113, 2)
4	4.7513E-05 (223, 5)	4.0776E-05 (191, 3)	4.4334E-05 (191, 3)	4.2807E-05 (191, 3)	8.0287E-06 (265, 7)
5	5.1837E-05 (272, 5)	4.7924E-05 (152, 3)	4.8618E-05 (152, 3)	4.6632E-05 (152, 3)	7.2980E-06 (206, 1)
6	5.8720E-05 (206, 6)	4.5787E-05 (114, 7)	4.4689E-05 (325, 8)	4.2377E-05 (325, 8)	6.7232E-06 (259, 7)
7	8.2998E-05 (354, 6)	8.7240E-05 (168, 6)	6.5937E-05 (168, 6)	5.0804E-05 (168, 6)	5.8440E-06 (337, 7)
8	6.7441E-05 (246, 5)	5.6313E-05 (254, 6)	4.8091E-05 (254, 6)	3.9422E-05 (151, 5)	4.0472E-06 (354, 8)
9	9.2859E-05 (151, 5)	6.6839E-05 (151, 5)	4.8699E-05 (151, 5)	3.6552E-05 (151, 5)	4.9118E-06 (117, 1)
10	5.4329E-05 (210, 3)	4.5781E-05 (208, 3)	3.5293E-05 (208, 3)	2.7481E-05 (208, 3)	5.2243E-06 (352, 1)
11	4.7951E-05 (193, 4)	4.1940E-05 (334, 2)	4.4314E-05 (103, 6)	3.9332E-05 (334, 2)	6.9267E-06 (276, 7)
12	6.4263E-05 (150, 7)	6.1835E-05 (276, 6)	5.2465E-05 (325, 1)	5.0422E-05 (325, 1)	7.0708E-06 (73, 7)
13	7.2879E-05 (224, 6)	6.6247E-05 (169, 3)	5.7571E-05 (246, 4)	4.7338E-05 (144, 6)	5.7136E-06 (40, 7)
14	6.1365E-05 (222, 3)	5.5842E-05 (222, 3)	5.0767E-05 (277, 6)	4.9286E-05 (246, 3)	5.6652E-06 (300, 7)
15	7.5090E-05 (235, 7)	5.4985E-05 (262, 4)	4.3782E-05 (163, 7)	4.4430E-05 (163, 7)	3.6056E-06 (235, 7)
16	4.5837E-05 (262, 4)	5.3168E-05 (123, 2)	5.6184E-05 (123, 2)	5.3025E-05 (123, 2)	3.2238E-06 (129, 8)
17	6.2980E-05 (154, 3)	6.3904E-05 (154, 3)	5.8570E-05 (154, 3)	5.1177E-05 (154, 3)	5.7030E-06 (187, 7)
18	6.7102E-05 (145, 7)	6.5373E-05 (145, 7)	6.2993E-05 (129, 8)	5.8090E-05 (66, 8)	3.2283E-06 (58, 7)
19	6.5029E-05 (221, 5)	5.0377E-05 (268, 4)	4.1663E-05 (268, 4)	3.7928E-05 (311, 6)	4.6100E-06 (41, 3)
20	8.4215E-05 (249, 4)	6.9932E-05 (249, 3)	6.2530E-05 (249, 3)	5.3672E-05 (249, 3)	3.2337E-06 (225, 8)
21	6.4443E-05 (164, 6)	4.9199E-05 (359, 5)	3.8604E-05 (340, 7)	3.6230E-05 (6, 3)	7.1449E-06 (331, 1)
22	7.2563E-05 (242, 5)	4.9654E-05 (242, 5)	3.9679E-05 (268, 8)	3.5714E-05 (245, 6)	6.3973E-06 (167, 1)
23	5.7892E-05 (167, 3)	4.0473E-05 (167, 3)	3.1576E-05 (349, 2)	2.8218E-05 (296, 6)	6.1283E-06 (159, 7)
24	7.3456E-05 (219, 3)	6.7811E-05 (222, 6)	4.6190E-05 (222, 6)	3.7637E-05 (209, 3)	7.3347E-06 (242, 3)
25	7.0618E-05 (45, 6)	8.4963E-05 (325, 7)	9.2905E-05 (325, 7)	8.4593E-05 (325, 7)	3.9656E-06 (325, 7)
26	5.0593E-05 (161, 7)	4.4130E-05 (252, 5)	3.6611E-05 (238, 2)	3.2363E-05 (238, 2)	3.2353E-06 (164, 7)
27	4.6182E-05 (147, 3)	5.8382E-05 (147, 3)	5.2447E-05 (224, 3)	4.3461E-05 (224, 3)	7.2722E-06 (80, 3)
28	4.6664E-05 (202, 3)	5.0129E-05 (268, 6)	4.4860E-05 (248, 3)	4.1170E-05 (248, 3)	3.2392E-06 (71, 7)
29	5.9693E-05 (273, 3)	5.8429E-05 (273, 3)	5.2275E-05 (273, 3)	4.6824E-05 (268, 2)	4.3759E-06 (236, 8)
30	5.5828E-05 (85, 5)	4.3770E-05 (170, 4)	3.7644E-05 (239, 3)	3.4299E-05 (291, 2)	6.2024E-06 (241, 3)
31	7.3820E-05 (227, 6)	6.8343E-05 (346, 8)	6.3950E-05 (113, 4)	5.5508E-05 (249, 1)	5.5570E-06 (165, 2)
32	6.8805E-05 (245, 5)	4.7763E-05 (245, 5)	4.7197E-05 (342, 4)	4.4421E-05 (342, 4)	7.7304E-06 (248, 7)
33	7.7315E-05 (223, 4)	6.2102E-05 (109, 6)	5.5286E-05 (227, 1)	5.4687E-05 (227, 1)	5.7080E-06 (161, 2)
34	8.2527E-05 (192, 3)	7.8462E-05 (269, 5)	6.8335E-05 (268, 1)	6.4973E-05 (268, 1)	6.8092E-06 (172, 1)
35	5.9364E-05 (62, 3)	6.4340E-05 (62, 3)	6.4080E-05 (62, 3)	6.0974E-05 (62, 3)	6.2558E-06 (273, 8)
36	5.5163E-05 (270, 6)	5.5969E-05 (161, 6)	4.3265E-05 (270, 6)	3.6121E-05 (270, 6)	3.9263E-06 (137, 1)

ASPHCRS

J4912A

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****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
****A   END   JOB 4912   ASPHCRS   ARROYO        80001046,002   7.24.49 PM   03 DEC 79   PRINTER1   NER1   JOB 4912   END   A****
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DESCRIPTION	QUANTITY	CHARGE
LINES PRINTED	336	$ 0.06
PAGES PRINTED	10	$ 0.11
PRINT CHARGE		$ 0.17

PTMAX OUTPUT

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0051 TSI CHICKEN FEED
0052 ANALYSIS OF CONCENTRATION AS A FUNCTION OF STABILITY AND WIND SPEED. (D. B. TURNER)
0053  EMISSION RATE (G/SEC) =    1.25, PHY HT (M) =   34.80, STACK TEMP (DEG,K) = 310.00, STACK VEL (M/SEC) =  17.30,
0054  DIAM (M) =  0.52, VOLUME FLOW (CU M/SEC) =    3.67
0055     WIND SPEED (M/SEC)   0.5        0.8        1.0        1.5        2.0        2.5        3.0        4.0        5.0
0056 STABILITY = 1
0057  MAX CONC (G/CU M)   1.2283E-04 9.9145E-05 8.7532E-05 6.7154E-05 5.4274E-05 4.5542E-05 3.9206E-05
0058  DIST OF MAX (KM)       1.270      0.237      0.225      0.210      0.202      0.193      0.184
0059  PLUME HEIGHT (M)        55.1       47.5       45.0       41.6       39.9       38.9       38.2
0060 STABILITY = 2
0061  MAX CONC (G/CU M)   1.1542E-04 9.5305E-05 8.4725E-05 6.5543E-05 5.3324E-05 4.4327E-05 3.8639E-05 3.0255E-05 2.4849E-05
0062  DIST OF MAX (KM)       0.393      0.342      0.323      0.293      0.286      0.279      0.274      0.268      0.264
0063  PLUME HEIGHT (M)        55.1       47.5       45.0       41.6       39.9       38.9       38.2       37.3       36.8
0064 STABILITY = 3
0065  MAX CONC (G/CU M)                                                 5.5073E-05 4.5393E-05 4.0045E-05 3.1412E-05 2.5823E-05
0066  DIST OF MAX (KM)                                                      0.423      0.415      0.409      0.399      0.393
0067  PLUME HEIGHT (M)                                                       39.9       38.9       38.2       37.3       36.8
0068 STABILITY = 4
0069  MAX CONC (G/CU M)   8.4153E-05 7.4240E-05 6.7454E-05 5.3913E-05 4.4493E-05 3.7609E-05 3.2536E-05 2.5595E-05 2.1032E-05
0070  DIST OF MAX (KM)       1.244      1.025      0.954      0.862      0.817      0.732      0.775      0.754      0.741
0071  PLUME HEIGHT (M)        55.1       47.5       45.0       41.6       39.9       38.9       38.2       37.3       36.8
0072 STABILITY = 5
0073  MAX CONC (G/CU M)                                                 2.0950E-05 1.6971E-05 1.4764E-05 1.1896E-05 9.8360E-06
0074  DIST OF MAX (KM)                                                      1.395      1.329      1.773      1.707      1.555
0075  PLUME HEIGHT (M)                                                       50.6       49.4       48.6       47.3       45.4
0076 STABILITY = 6
0077  MAX CONC (G/CU M)                                                 1.6595E-05 1.3993E-05 1.2145E-05 9.5795E-06 8.0927E-06
0078  DIST OF MAX (KM)                                                      3.324      3.223      3.155      3.050      2.975
0079  PLUME HEIGHT (M)                                                       47.9       46.9       46.2       45.2       44.4
0080     WIND SPEED (M/SEC)   7.0        10.0       12.0       15.0       20.0
0081 STABILITY = 3
0082  MAX CONC (G/CU M)   1.9045E-05 1.3657E-05 1.1933E-05 9.2737E-06
0083  DIST OF MAX (KM)       0.385      0.381      0.379      0.377
0084  PLUME HEIGHT (M)        35.3       35.3       35.6       35.5
0085 STABILITY = 4
0086  MAX CONC (G/CU M)   1.5677E-05 1.1133E-05 9.4177E-06 7.6103E-06 6.7656E-06
0087  DIST OF MAX (KM)       0.727      0.715      0.712      0.708      0.708
0088  PLUME HEIGHT (M)        35.3       35.3       35.6       35.5       35.3
0089  (1) THE DISTANCE TO THE POINT OF MAXIMUM CONCENTRATION IS SO GREAT THAT THE SAME STABILITY IS NOT LIKELY TO PERSIST
0090         LONG ENOUGH FOR THE PLUME TO TRAVEL THIS FAR.
0091  (2) THE PLUME IS OF SUFFICIENT HEIGHT THAT EXTREME CAUTION SHOULD BE USED IN INTERPRETING THIS COMPUTATION AS THIS
0092         STABILITY TYPE MAY NOT EXIST TO THIS HEIGHT. ALSO WIND SPEED VARIATIONS WITH HEIGHT MAY EXERT A DOMINATING
0093         INFLUENCE.
0094  (3) NO COMPUTATION WAS ATTEMPTED FOR THIS HEIGHT AS THE POINT OF MAXIMUM CONCENTRATION IS GREATER THAN 100 KILOMETERS
0095         FROM THE SOURCE.
0096 TOP OUTPUT CHARGE: $  .02
END OF WORK FILE
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TRUCK RECEIVING SYSTEM

SECTION II

SUPPLEMENT FOR SECTION II-G

The best available control technology (BACT) and the "Prevention of Significant Deterioration" (PSD) requirements do not apply to this source because the potential emission from all five control systems is estimated to be less than 250 tons/year.

The following calculations have been made utilizing information contained in a report sponsored by the U.S.E.P.A., in which efficiencies of pellet cooling cyclone collectors were studied (please refer to the pertinent sections of the report which we have included as "Section V, Supplement 3-A"). We have averaged the 3 reported values of inlet particulate concentrations to be 0.40 gr./cf, to the nearest tenth gr. Because we do not have any information which describes the quality of dust streams such as those for truck receiving, receiving system, mixing system, and grinding system, we have assumed that the 0.40 gr./c.f. may also be used for these dust streams. This information, combined with fan operating cfm air flow rates, and the plant ultimate design data for number of hours of operation/year for each system, has enabled us to calculate the potential emission on a very approximate basis. Please refer to the calculations below.

1. Truck Receiving System

Annual operation = 519 hours/year
Fan airflow = 9,119 cfm
Dust stream quality = 0.40 gr./cf.

$$\text{Potential emission} = \frac{519 \text{ hours}}{\text{year}} \cdot \frac{9119 \text{ cf}}{\text{min.}} \cdot \frac{60 \text{ min}}{\text{hour}} \cdot \frac{0.40 \text{ gr. ton}}{\text{c.f. } 14 \times 10^6 \text{ gr.}}$$

Potential emission = 8.11 tons/year

2. Receiving System

Annual operation = 1,730 hours/year
Fan airflow = 4,385 cfm
Dust stream quality = 0.40 gr./cf.

$$\text{Potential emission} = \frac{1730 \text{ hours}}{\text{year}} \cdot \frac{4385 \text{ cf}}{\text{min.}} \cdot \frac{60 \text{ min.}}{\text{hour}} \cdot \frac{0.40 \text{ gr. ton}}{\text{cf } 14 \times 10^6 \text{ gr.}}$$

Potential emission = 13.01 tons/year

3. Grain Grinding System

Annaul operation = 3256 hours/year
Fan airflow = 3353 cfm
Dust stream quality = 0.40 gr./cf

$$\text{Potential emission} = \frac{3256 \text{ hours}}{\text{year}} \frac{3353 \text{ cf}}{\text{min}} \frac{60 \text{ min}}{\text{hour}} \frac{0.40 \text{ gr.}}{\text{cf}} \frac{\text{ton}}{14 \times 10^6 \text{ gr.}}$$

Potential emission = 18.72 tons/year

4. Mixing System

Annual operation = 2,823 hours/year
Fan airflow = 1547 cfm
Dust stream quality = 0.40 gr/cf

$$\text{Potential emission} = \frac{2823 \text{ hours}}{\text{year}} \frac{1547 \text{ cf}}{\text{min}} \frac{60 \text{ min}}{\text{hour}} \frac{0.40 \text{ gr.}}{\text{cf}} \frac{\text{ton}}{14 \times 10^6 \text{ gr.}}$$

Potential emission = 7.49 tons/year

5. Pellet cooling system

Annual operation = 3,445 hours/year
Fan air flow = 31,653 cfm
Dust stream quality = 0.40 gr./cf

$$\text{Potential emission} = \frac{3,445 \text{ hours}}{\text{year}} \frac{31,653 \text{ cf}}{\text{min}} \frac{60 \text{ min.}}{\text{hour}} \frac{0.40 \text{ gr.}}{\text{cf}} \frac{\text{ton}}{14 \times 10^6 \text{ gr.}}$$

Potential emission = 186.93 tons/year

POTENTIAL EMISSION SUMMARY

SYSTEM		POTENTIAL EMISSION - TONS/YEAR
1. Truck Receiving System		8.11
2. Receiving System		13.01
3. Grain Grinding System		18.72
4. Mixing System		7.49
5. Pellet Cooling System		186.93
Total Potential Emission	=	234.26 tons/year

TRUCK RECEIVING SYSTEM

SECTION V

SUPPLEMENT 1

A. Total process input rate derivation

1. Maximum receiving system conveying rate = 4450 cubic feet per hour.

2. Average weight of material received, based on master formula calculations = 44 pounds per cubic foot.

3. 4450 cu. ft./hr. x 44 lbs./ cu. ft. = 195,800 pounds per hour.

B. Product weight derivation

1. Product weight = Total process input weight less airborne contaminants emitted.

2. 195,800 lbs/hr. less (potential discharge) x (1-efficiency)

= 195,800 lbs/hr. - (31.27) (1-0.99)
= 195,799.69 lbs/hr.

TRUCK RECEIVING SYSTEM

SECTION V

SUPPLEMENT 2-A

Basis of emission estimate

The emission estimate is obtained by applying the control device efficiency to the potential discharge.

1. Emission estimate (lbs/hr.)

   Emission estimate = potential discharge x (1-efficiency)

   $$\text{Emission estimate} = 31.27 \frac{\text{lbs}}{\text{hr.}} \times (1-0.99)$$

   $$\text{Emission estimate} = 0.31 \frac{\text{lbs.}}{\text{hr.}}$$

2. Emission estimate (tons/year)

   $$\text{Emission estimate} = 8.11 \frac{\text{ton}}{\text{year}} \times (1\text{-efficiency})$$

   $$\text{Emission estimate} = 8.11 \times (1 - .99)$$

   $$\text{Emission estimate} = 0.081 \text{ tons/year}$$

TRUCK RECEIVING SYSTEM

SECTION V

SUPPLEMENT 2-6

1. Letter from Aircon Corporation with regard to control device efficiency, dated September 17, 1979.

2. Bulletin No. WR77 from Flex-Kleen.

Aircon
CORPORATION

PNEUMATIC CONVEYING SYSTEMS
DESIGNERS · FABRICATORS · ERECTORS

September 17, 1979

Younglove Construction Company
P.O. Box 1768
Sioux City, Iowa 51102

Attn: Mr. Bill Bradbury

Dear Bill:

Enclosed is the information for the dust control system at Cargill Company, Jacksonville, Florida.

Under Section II, the cost break-downs are approximately as follows:

Item # 4	-	$ 26,000.00
Item # 5	-	$ 16,350.00
Item # 59	-	$ 15,000.00
Item #114	-	$ 12,000.00
Pellet Coolers		$ 22,500.00

The above figures include equipment by Aircon only, please add the equipment to be furnished by Younglove.

Under Section III, the efficiency of the control devices are 99% efficient on collected particles of 5 microns and larger.

Under Section V, paragraph 2, I am unable to give an accurate figure of emission since I am not familar with the input rate or proposed operating conditions.

Paragraph 4:

Item # 4	-	9119 ACFM - 960 square feet of cloth 9.49 A/C ratio
Item # 15	-	4385 ACFM - 480 square feet of cloth 9.13 A/C ratio
Item # 59	-	3353 ACFM - 360 square feet of cloth 9.31 A/C ratio
Item #114	-	1547 ACFM - 160 square feet of cloth 9.67 A/C ratio

September 17, 1979

Paragraph 5:

Same as paragraph 2

Bill, I hope the above information will be some assistance to you. Should you have any questions, please give me a call.

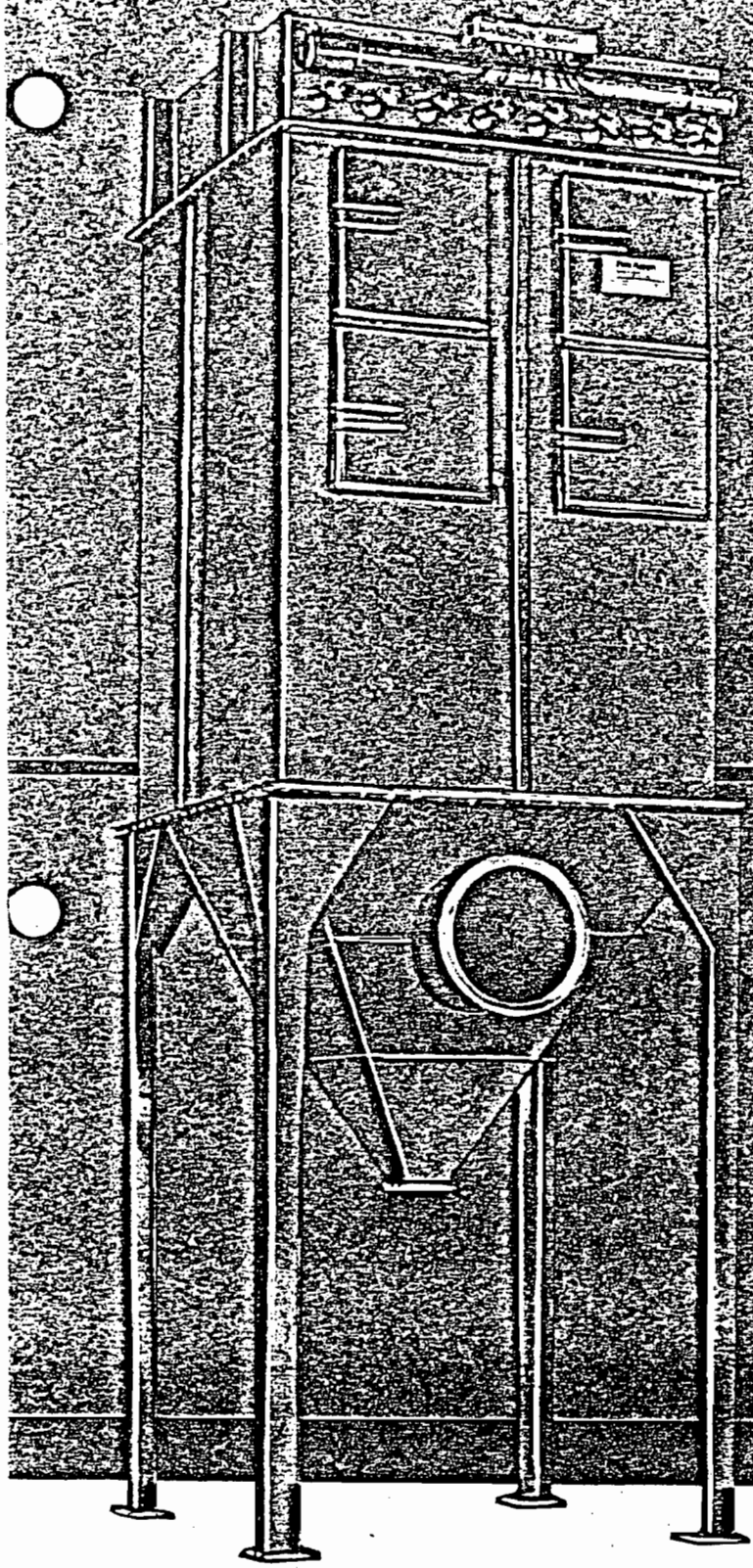
Sincerely,

AIRCON CORPORATION

Fred Edmaiston

FE/jjd

BULLETIN NO. WR77



WR *pulse-jet*
FABRIC FILTERS

for

PRODUCT RECOVERY

NUISANCE DUST CONTROL

BIN VENTING

- ALL WELDED
- LOW COST
- HIGH EFFICIENCY
- CAPACITY TO 18,000 CFM
- STOCK MODELS AVAILABLE

Air Pollution Control Equipment

Flex-Kleen

Research-Cottrell

The WR series

...all welded pulse-jet dust collector

The WR series is Flex-Kleen's intermediate size filters for use in product recovery systems, general nuisance dust control problems or large bin venting applications. High air/cloth ratios, excellent filtration efficiencies and no internal moving parts make these fabric filters ideal for a broad range of applications. In this bulletin we describe three major categories of the WR series: the WRC custom design and WRS standardized design, both bottom bag removal; and on the back page the WRT top bag removal design. All three offer clear-cut advantages to the customer.

LOW INSTALLATION COSTS

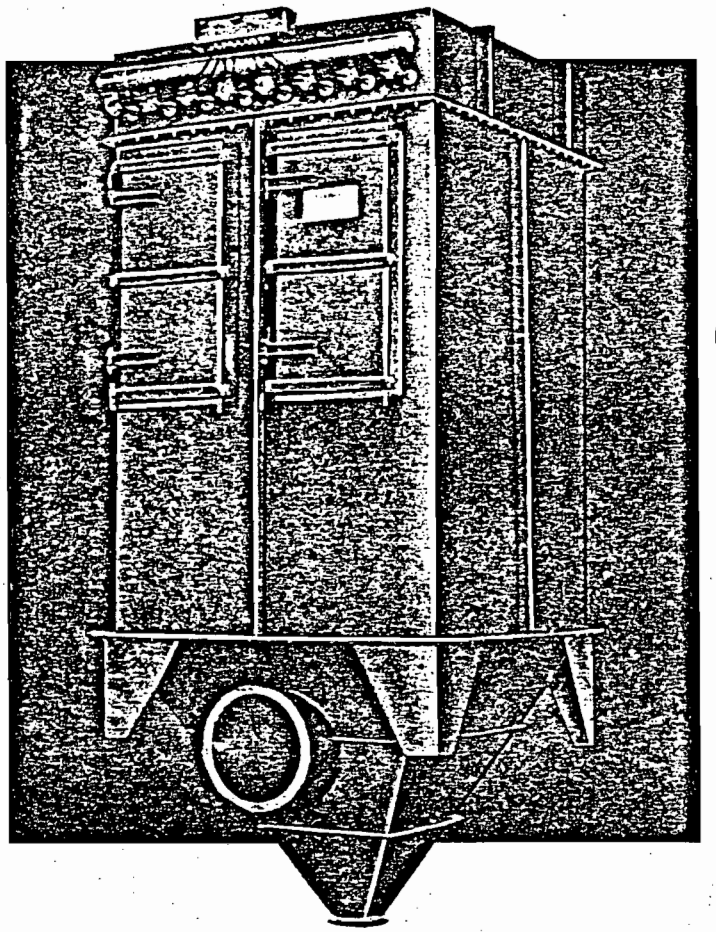
- HOUSING SHIPPED FULLY ASSEMBLED
  thru the 96 bag size; hoppers shipped separately on larger sizes. This means faster installations and lower field labor costs. Bags, cages and headers shipped separately to avoid damage in transit.
- QUICK AND EASY
  mounting of compressed air headers; they are shipped pre-wired and pre-piped.

LOW OPERATING COSTS

- ADJUSTABLE TIMER
  allows user to maintain low pressure drop with minimum compressed air consumption, thereby reducing overall energy cost.
- DIFFERENTIAL PRESSURE GAUGE
  provided to evaluate collector operation, and optimize bag cleaning program.

LOW MAINTENANCE COSTS

- NO INTERNAL MOVING PARTS,
  greatly reducing the necessity for interior maintenance; minimizes collector shut-down.
- EASY INSPECTION
  of the clean air plenum thru quick-opening top access ports. Ample number of access doors to the dusty chamber.
- QUICK BAG REPLACEMENT.
  Flex-Kleen's bag and cage attach easily and positively. A full internal grid for greater personnel convenience is available as an option; and quick-release clamps (optional) make it even easier to change out bags.



The WRC custom fabric filter

...built to customers' specifications

This series of custom collectors, available in sizes shown in the table on the facing page, can be manufactured with modifications (for hazardous service, sanitary applications or height limitations) to meet the exact specifications of the customer or as suggested by our engineers. Inlets and outlets can be modified; and the collector can even be shipped completely knocked down for quick erection in an existing building.

The WRS standard fabric filter

...pre-engineered for quick delivery

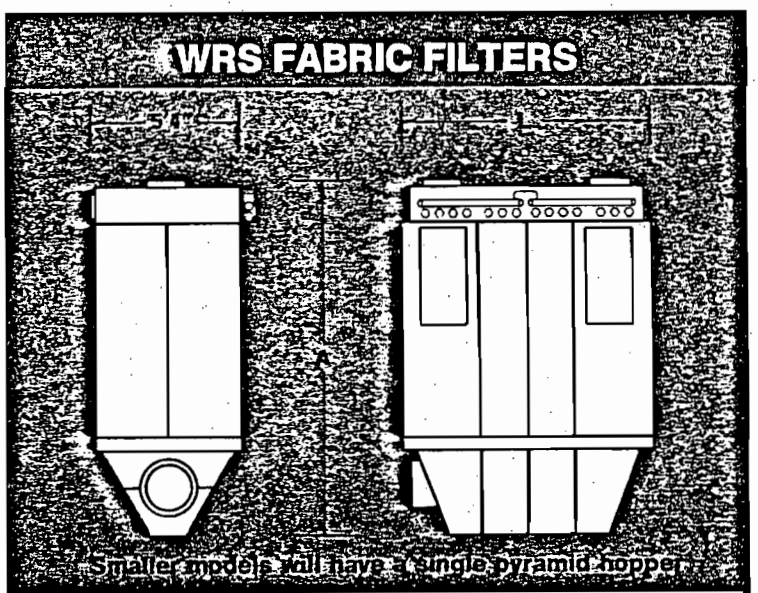
Flex-Kleen offers the WRS line of standard collectors which have been designed with all the features required to meet most dust control applications. This standardization permits the stocking of components for quick delivery and lower cost. In addition, there are pre-engineered options available to meet individual job requirements, without affecting delivery. Stock units thru 9000 CFM (Model 100WRS-96 in the table below). Larger units available to 18000 CFM.

FEATURES

- Bottom bag removal
- Welded 12 gauge hot rolled steel construction
- ± 17" w.g. design
- Flanged air inlet, outlet and dust discharge
- 20" diameter top access port(s)
- 20" x 44" quick opening access door(s) to the bag chamber
- Heavy gauge cast aluminum venturis
- Heavy duty, smooth wire cages
- NEMA 4 (weathertight) electricals
- Corner saddle supports thru 96-bag size
- Six inch girth channel for continuous support, on sizes larger than 96 bags
- Differential pressure and air header gauges

OPTIONS

- Epoxy coated or 304SS bag cages
- Wide range of interior coatings
- Electrical components rated for hazardous areas
- Inlet baffle with target plate
- Full internal service grid
- Standard legs
- Standard exterior access platform
- Quick release bag clamps
- High efficiency filter bags in a variety of materials



Model No.	Square Feet of Cloth	A	L	Weight (Approx.)
84WRS-48	**480**	**13' 2"**	**4' 0"**	**2050**
100WRS-48	**576**	**14' 6"**	**4' 0"**	**2250**
84WRS-64	**640**	**13' 2"**	**5' 4"**	**2450**
100WRS-64	**768**	**14' 6"**	**5' 4"**	**2700**
84WRS-80	**800**	**14' 4"**	**6' 8"**	**3000**
100WRS-80	**960**	**15' 8"**	**6' 8"**	**3300**
84WRS-96	**960**	**15' 5"**	**8' 0"**	**3450**
100WRS-96	**1152**	**16' 9"**	**8' 0"**	**3800**
84WRS-112	1120	12' 10"	9' 4"	3950
100WRS-112	1344	14' 2"	9' 4"	4350
84WRS-128	1280	12' 10"	10' 8"	4300
100WRS-128	1536	14' 2"	10' 8"	4750
84WRS-144	1440	12' 10"	12' 0"	4800
100WRS-144	1728	14' 2"	12' 0"	5300
84WRS-160	1600	12' 10"	13' 4"	5200
100WRS-160	1920	14' 2"	13' 4"	5750
84WRS-176	1760	12' 10"	14' 8"	5750
100WRS-176	2112	14' 2"	14' 8"	6300
84WRS-192	1920	12' 10"	16' 0"	6100
100WRS-192	2304	14' 2"	16' 0"	6750

Certified drawings available on all sizes immediately on receipt of an order. Units in bold-face available from stock.

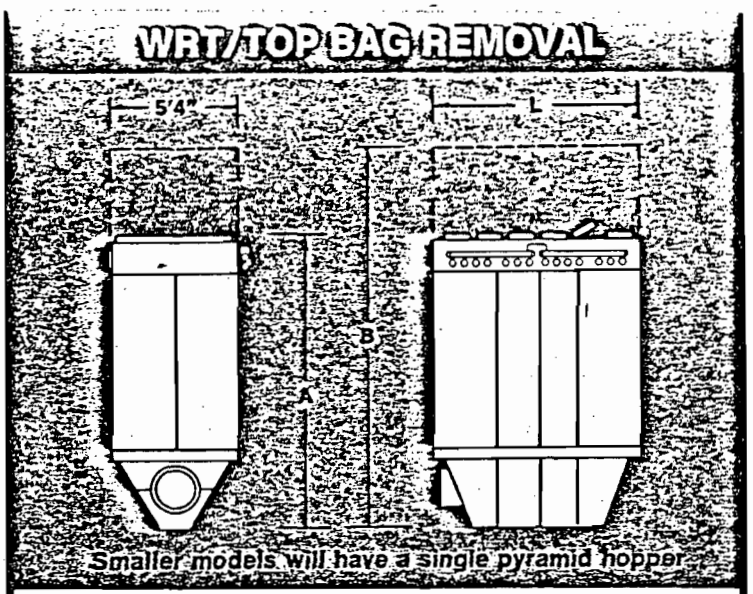
WRT top bag removal

Top bag removal means that personnel do not have to enter the dusty chamber where there may be hazardous dusts. In addition, with top bag removal it is easy to identify a broken or worn bag—there is a tell-tale stream of dust at the mouth of the bag. Also, replacing bags is simple; no necessity to remove other bags to get at the worn one.

The WRT dust collector is the top bag removal version of the series described in this bulletin. Sizes are shown in the accompanying table, and standard construction is all-welded 12-gauge mild steel, with roof hatches, and stiffened for 17″ w.g. These units can be ordered on an accelerated schedule with standard features, or they are available with a wide variety of options, some of which are mentioned in the WRC section of this bulletin. A walk-in clean air plenum is also available in the WRT series.

EXCLUSIVE FEATURES

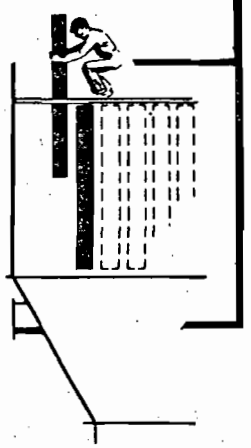
- POSITIVE BAG SEAL
  without O-rings or other gasketing materials that may deteriorate or take a set and eventually leak.
- FOOL-PROOF INSTALLATION.
  Bag snaps into place easily; cage drops into position and seats firmly. No clamps, cams, or threaded connections to get fouled.
- NO TOOLS REQUIRED.
  Bags changed without tools; no need for specialized craftsmen.
- WEATHERPROOF
  walk-in clean air plenum is optional.



Model No.	Square Feet of Cloth	A	B*	L	Weight (Approx.)
84WRT-48	480	13′ 8″	21′ 2″	4′ 0″	2000
100WRT-48	576	15′ 0″	23′ 11″	4′ 0″	2200
84WRT-64	640	13′ 8″	21′ 2″	5′ 4″	2350
100WRT-64	768	15′ 0″	23′ 11″	5′ 4″	2600
84WRT-80	800	14′ 10″	22′ 4″	6′ 8″	2900
100WRT-80	960	16′ 2″	25′ 1″	6′ 8″	3200
84WRT-96	960	15′ 11″	23′ 5″	8′ 0″	3350
100WRT-96	1152	17′ 3″	26′ 2″	8′ 0″	3700
84WRT-112	1120	13′ 4″	20′ 10″	9′ 4″	3800
100WRT-112	1344	14′ 8″	23′ 7″	9′ 4″	4200
84WRT-128	1280	13′ 4″	20′ 10″	10′ 8″	4200
100WRT-128	1536	14′ 8″	23′ 7″	10′ 8″	4600
84WRT-144	1440	13′ 4″	20′ 10″	12′ 0″	4700
100WRT-144	1728	14′ 8″	23′ 7″	12′ 0″	5200
84WRT-160	1600	13′ 4″	20′ 10″	13′ 4″	5100
100WRT-160	1920	14′ 8″	23′ 7″	13′ 4″	5600
84WRT-176	1760	13′ 4″	20′ 10″	14′ 8″	5600
100WRT-176	2112	14′ 8″	23′ 7″	14′ 8″	6200
84WRT-192	1920	13′ 4″	20′ 10″	16′ 0″	6000
100WRT-192	2304	14′ 8″	23′ 7″	16′ 0″	6600

*With walk-in weather-proof housing. Adds 25% (approx.) to weight.

FLEX-KLEEN'S
top bag removal design
is the finest in the industry



Flex-Kleen
Research-Cottrell

AIR POLLUTION CONTROL EQUIPMENT
222 SOUTH RIVERSIDE PLAZA / CHICAGO, ILLINOIS 60606
TELEPHONE 312 648-5300 / TELEX 254 254
SALES REPRESENTATIVES THROUGHOUT THE UNITED STATES
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TRUCK RECEIVING SYSTEM

SECTION V

SUPPLEMENT 3-A

BASIS OF POTENTIAL DISCHARGE

The calculation of the estimated potential discharge has been made by utilizing plant process design data, the fan air-flow rate, and an estimated air stream quality based upon an attached report. Data which describe process air stream quality are almost non-existant; therefore, this method is a rough approximation at best.

From the report's (Test number 73-GRN-1)Table 2, the inlet particulate concentration is averaged to the nearest tenth to be 0.40 gr,/cf. The new York Blower Co. No. 228 PLR fan is to deliver 9119 cfm. Therefore, the potential emission in lb.s/hr. is calculated to be:

$$\text{Potential Emission} = \frac{0.40 \text{ gr.} \times 9119 \text{ c.f.}}{\text{c.f.}} \quad \frac{\text{lb.}}{7000 \text{ gr.}} \quad \frac{60 \text{ min.}}{\text{hr}}$$

Potential Emission = 31.27 lbs./hr.

The original plant design data, shows that the truck receiving would operate a maximum of 519 hours/year. Therefore, annual potential emission is calculated as:

$$\text{Potential Emission} = \frac{3.127 \text{ lbs.} \times 519 \text{ hours}}{\text{hr.}} \quad \frac{\text{ton}}{\text{year } 2000 \text{ lb.}}$$

Potential Emission = 8.11 tons/year.

TRUCK RECEIVING SYSTEM

SECTION V

SUPPLEMENT 3-b

Portions of report as described on cover sheet.

TEST NUMBER 73-GRN-1

RALSTON PURINA COMPANY
LOUISVILLE, KENTUCKY

Prepared by

Richard W. Gerstle, P.E.
and
Robert S. Amick

EPA Project Officer

Thomas E. Ward

PEDCo-Environmental Specialists, Inc.
Cincinnati, Ohio

Contract No. 68-02-0237, Task 17

I. TABLE OF CONTENTS

II. INTRODUCTION

Tests Performed

A series of tests were conducted at the Ralston Purina Company, Chow Division Plant in Louisville, Kentucky on November 6 and 7, 1972. Tests were made to determine particulate concentrations at the inlet and outlet to the pellet cooler cyclone and at the outlet of the hammermill cyclone. Stack gas velocities, temperature, and moisture content were also measured during each test. Table 1 summarizes the test locations, dates and the measurements made.

Sampling Sites

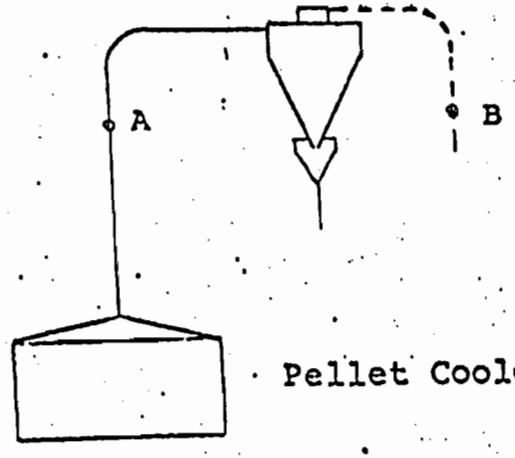
Figure 1 shows the sampling site locations. Stack gases were sampled for particulate concentration before and after the cyclone serving the pellet cooling operation at Points A and B in Figure 1. The outlet site was located in a temporary duct which had been added to the cyclone to provide a suitable sampling site. Normally the cyclone is vented directly to the atmosphere from the fan.

The outlet to the hammermill cyclone was also sampled for particulate matter. Sampling was done at point C as shown in Figure 1, by using a temporary cyclone outlet stack extension. The cyclone, as normally operated, had a rain cap (Chinaman's hat) placed over the outlet.

TABLE 1

SUMMARY OF EMISSION MEASUREMENTS MADE AT
RALSTON PURINA COMPANY IN LOUISVILLE, KENTUCKY

DATE 1972	TEST NO.	TEST SITE	STACK GAS PARAMETERS			EMISSIONS
			Velocity	Temp.	$\%H_2O$	Particulate
11/6	1	Pellet Cooler Cyclone Inlet				
11/6	2	Pellet Cooler Cyclone Outlet				
11/6	3	Pellet Cooler Cyclone Inlet				
11/6	4	Pellet Cooler Cyclone Outlet				
11/6	5	Pellet Cooler Cyclone Inlet				
11/6	6	Pellet Cooler Cyclone Outlet				
11/7	7	Hammermill Cyclone Outlet				
11/7	8	Hammermill Cyclone Outlet				
11/7	9	Hammermill Cyclone Outlet				



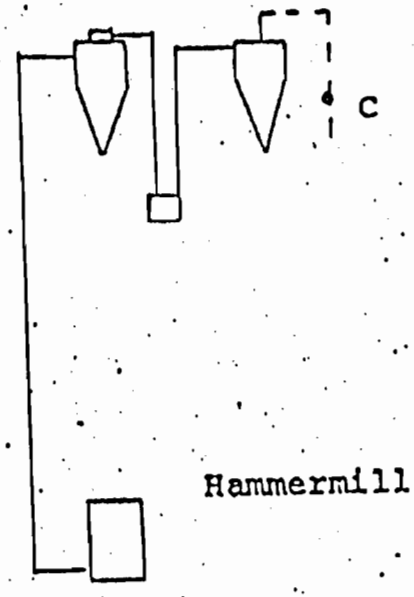


Figure 1. Sampling Sites - Ralston Purina Co., Louisville, Kentucky

III. SUMMARY OF RESULTS

Tables 2 through 6 summarize the stack gas parameters, and the emission, process, and sampling data obtained during this test series. Additional data, calculations, and original field data are included in the Appendices to this report.

Pellet Cooler

Table 2 contains the stack gas and particulate emission data for the pellet cooler at the inlet and outlet of the cyclone serving this operation. The slightly higher gas flows at the outlet site, as compared to the inlet site, are probably due to the leakage of outside air into the duct work around the fan shaft and housing.

Two values are reported for the particulate concentrations and emissions. The value designated as "front" represents the particulate collected in the front half of the sampling train, namely, the probe and filter. The "total" value is the entire amount of particulate collected in the train, namely the front half and the material collected in the impingers. The amount collected in the impingers (organic extract and inorganic residue) amounted to an average of 2% of the total particulate collected at the inlet site and 32% at the outlet.

TABLE 2.--PELLET COOLER EMISSION DATA SUMMARY

RALSTON PURINA COMPANY, LOUISVILLE, KENTUCKY

November 6, 1972

Test No.	Time	Site[a]	Stack Gas Parameters				Particulate Emissions					
			Velocity FPS	Temp. °F.	Moisture %	Volume[b] SCFM	Concentration Grs./SCF		Pounds/Hour		Pounds/Ton	
							Front	Total	Front	Total	Front	Total
1	13:30 to 15:45	Inlet	57.1	94	2.2	15,495	.3616	.3696	48.019	49.075	4.99	5.10
2		Outlet	44.5	90	2.5	16,085	.0159	.0250	2.149	3.445	.223	.358
3	16:20 to 18:30	Inlet	55.9	92	2.0	15,200	.4074	.4161	53.066	54.197	5.51	5.63
4		Outlet	44.7	90	1.9	16,167	.0143	.0213	1.976	2.948	.205	.306
5	19:20 to 21:40	Inlet	53.3	90	2.2	14,538	.5020	.5083	62.546	63.335	5.80	5.87
6		Outlet	44.3	86	2.3	16,057	.0128	.0175	1.765	2.409	.164	.223

(a) Inlet and outlet to cyclone collector

(b) Standard cubic feet per minute, dry basis corrected to 70°F. and 29.92 Hg.

IND ALLOW 10T 19.2
KAN 19.2
ILL ALLOW 10T NEW 8.7
OLD 19.2

TABLE 3. PELLET COOLER PRODUCTION DATA

Run No.	Test No.	Feed Composition, %	Feed Rate, Pounds/Hour
1	1,2	40% Ground Corn 30% Wheat Middlings 5% Minerals 20% Grain By-Products 5% Molasses	19256
2	3,4		
3	5,6	65% Ground Corn 25%-30% Soybean Meal 5% Minerals 2% Animal By-Products	20575[a] 22550[b]

(a) Rate during first hour of a two-hour test.

(b) Rate during second hour; average rate = 21563

TABLE 4. SUMMARY OF LABORATORY RESULTS AND SAMPLING DATA

RALSTON PURINA COMPANY - PELLET COOLER

Test Number	Meter Volume SCFD[a]	Particulate Found, mg		% Isokinetic
		Front	Total	
1	83.246	1950.9	1993.8	107
2	60.883[b]	61.5	98.6	102
3	78.364	2068.9	2113.0	107
4	107.546	99.4	148.3	101
5	78.706	2560.7	2593.0	108
6	110.894	92.2	125.8	104

a) Standard Cubic Feet, Dry Basis Corrected to 70° F and 29.92" Hg.

b) Smaller Sized Sampling Nozzle Used During This Run

TABLE 5. HAMMERMILL EMISSION DATA SUMMARY
RALSTON PURINA COMPANY, LOUISVILLE, KENTUCKY
November 7, 1972

Test No.	Time	Stack Gas Parameters [a]				Particulate Emissions					
		Velocity FPS	Temp. °F.	Moisture %	Volume [b] SCFM	Concentration Grs./SCF		Pounds/Hour		Pounds/Ton	
						Front	Total	Front	Total	Front	Total
7	12:30 to 15:30	52.5	72	1.7	5,316	.0253	.0335	1.151	1.525	.144	.191
8	16:20 to 17:00	57.0	78	1.5	5,713	.0192	.0252	.938	1.234	.117	.154
9	18:30 to 19:40	62.1	76	1.7	6,240	.0153	.0212	.817	1.133	.102	.142

(a) Cyclone Outlet

(b) Standard cubic feet per minute, dry basis corrected to 70°F. and 29.92" Hg.

TABLE 6. SUMMARY OF LABORATORY RESULTS AND SAMPLING DATA

RALSTON PURINA COMPANY - HAMMERMILL CYCLONE OUTLET

Test Number	Meter Volume SCFD[a]	Particulate Found, mg		% Isokinetic
		Front	Total	
7	80.471	131.8	174.6	111
8	46.469	57.7	75.9	115
9	50.419	49.9	69.2	114

a) Standard cubic feet per minute, dry basis corrected to 70°F and 29.92 "Hg.

Table 3 summarizes the pellet composition and production rate for each of the test runs. The first two runs (Test 1, 2, 3 and 4) were essentially identical from a production viewpoint. A dairy feed was produced during the first two runs at an average rate of 9.628 tons per hour. During the third run, two types of turkey feed were produced. The two feeds differed only in the amount of soybean meal, with the feed produced during the second hour of this run containing about 5% more soybean meal. During the switch from one feed to another, sampling was discontinued. The average process rate was 10.7815 tons per hour.

The data in Table 2 show that particulate emissions from the process increased during the three runs. Process weight rates were identical for the first two runs but increased during run 3. The total particulate emitted from the cyclone averaged 0.0212 grains per SCF, 2.934 pounds per hour, and 0.296 pounds per ton of product. Average cyclone efficiency, based on pounds of total particulate was 94.6%. There were no visible emissions from the cyclone outlet. Variations in efficiency are probably due to particle size variations.

Table 4 presents the laboratory results for each run, the volume of gas sampled and the percent of isokinetic sampling rate for each of the six tests on the pellet cooler. Each test extended over approximately a two hour period.

Hammermill

Table 5 presents a summary of stack gas parameters and particulate emission data for the hammermill cyclone outlet sampling site. An average of 1.3 pounds of particulate (0.162 pounds per ton of product) were emitted from this cyclone at a concentration of 0.0266 grains per standard cubic foot. A production rate of 8 tons per hour was maintained during all tests. The opacity was 5% white.

An average of 75% of the particulate matter was found in the front half of the sampling train. Table 6 presents a summary of the sample volumes, laboratory results, and percent of isokinetic sampling rate. Sampling times were two hours for test 7 and 64 minutes each for tests 8 and 9.

This sampling site contained two points which had negative velocity head readings due to the cyclonic nature of the flow. This flow pattern limits the accuracy of the total stack gas flow as measured with a pitot tube.

IV. PROCESS DESCRIPTION

Pellet Cooling

A wide variety of cattle and poultry feeds are manufactured in both checker and pellet form at this plant. In the pelletizing process tested, ingredients are mixed in a batch, and gravity fed to a California Pellet Mill where they are formed into small cylindrical pellets. As shown in Figure 2, the pellets then drop into a double-pass, horizontal cooler through which room air is drawn to cool and partially dry the warm pellets. (California Pellet Mill Co., Model No. 5 HR 34DD, Serial No. 232828). This cooler consists of two continuous perforated belts with an effective width of 34 inches and length of 60 inches. Dust entrained in the cooling air is collected in a Longhorn No. 79 cyclone collector and the cleaned air vented directly to the atmosphere. A 30 horsepower fan operating at 1330 rpm* was mounted at the cyclone outlet.

Fines collected in the cyclone are recycled to the pellet mill.

Hammermill

Whole kernel corn is pulverized by hammermills for use as a basic feed ingredient. A number of hammermills are used at this plant. The unit tested was a Prater, size 9, style GOS (Serial No. 22469), as shown in Figure 3. Cracked kernels

---

* not measured.

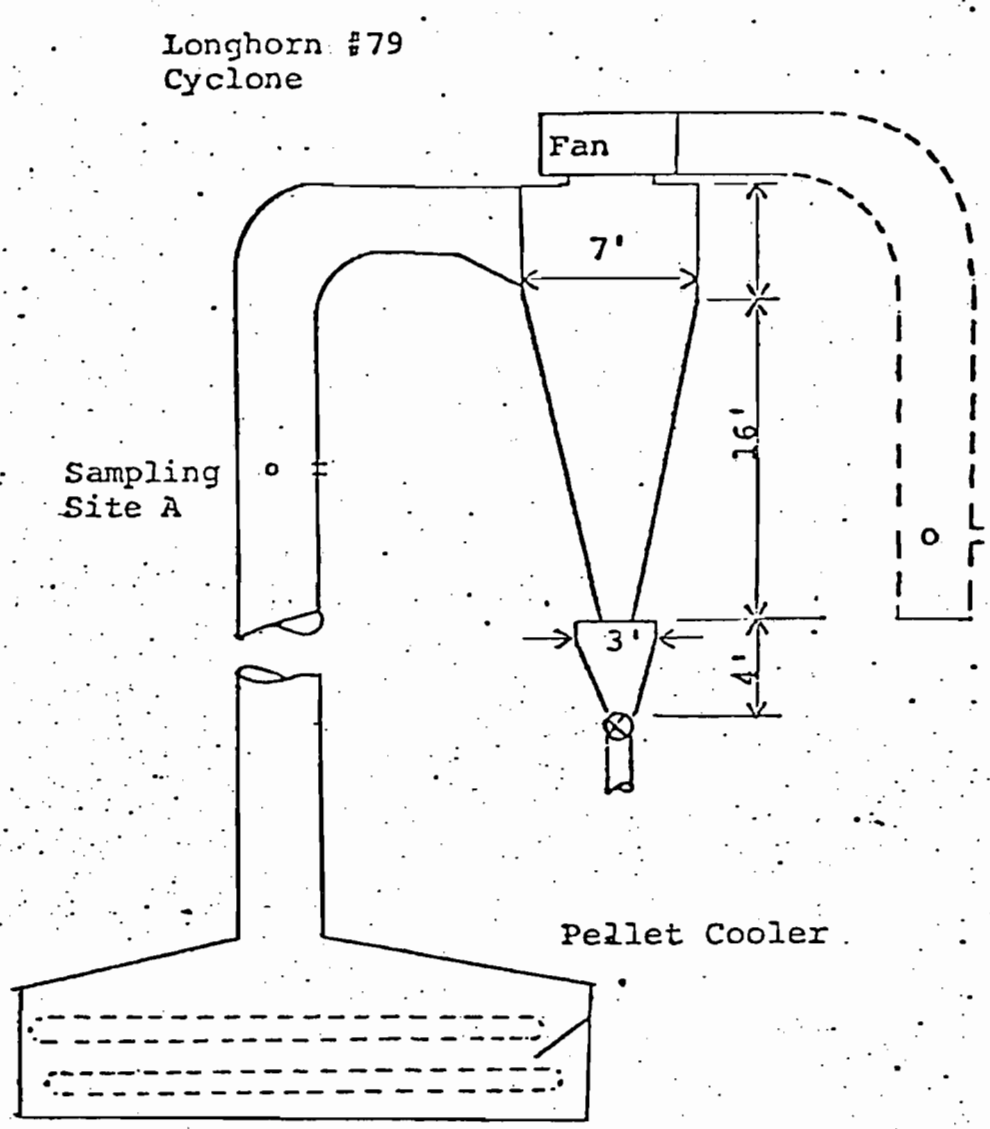


Figure 2. Pellet Cooler

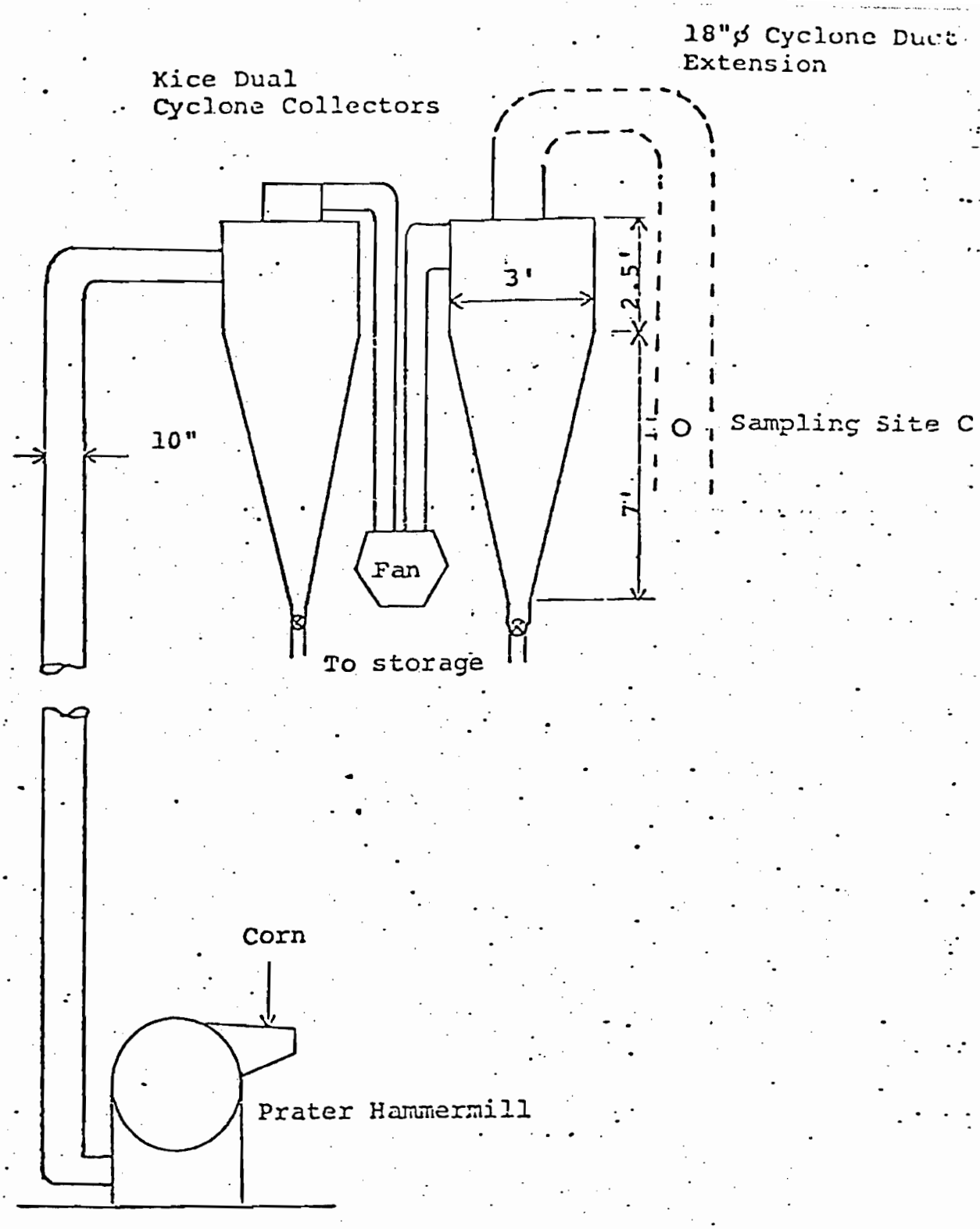


Figure 3. Hammermill System

are then pneumatically conveyed by a 50 horsepower blower to two cyclone collectors mounted in series. The cyclone collection system is a Kice, Model 2 SPW 16-8. The product is collected in the cyclones, and fines are vented to the atmosphere.

V. PROCESS OPERATION

Pellet Cooler

The pellet cooler operated in a normal manner. Feeds were chosen which provided long runs, i.e. about 2.5 hours. The composition of the feeds was previously shown in Table 3. The pellet mill operated at a power input of 130-150 amps during the first run and for 75% of the second run and then dropped off slowly to 110 amps.

The addition of a cyclone extension did not apparently effect the cooling air rate through the unit.

Hammermill

The hammermill operated continually in a normal manner. During each of these tests, Number 2 yellow corn with 2% FM was ground at a steady rate of 8 tons per hour. The hammermill operated at 1800 rpm, and a size 12 screen was used to yield a course grind. A sieve analysis of the ground corn yielded the following data:

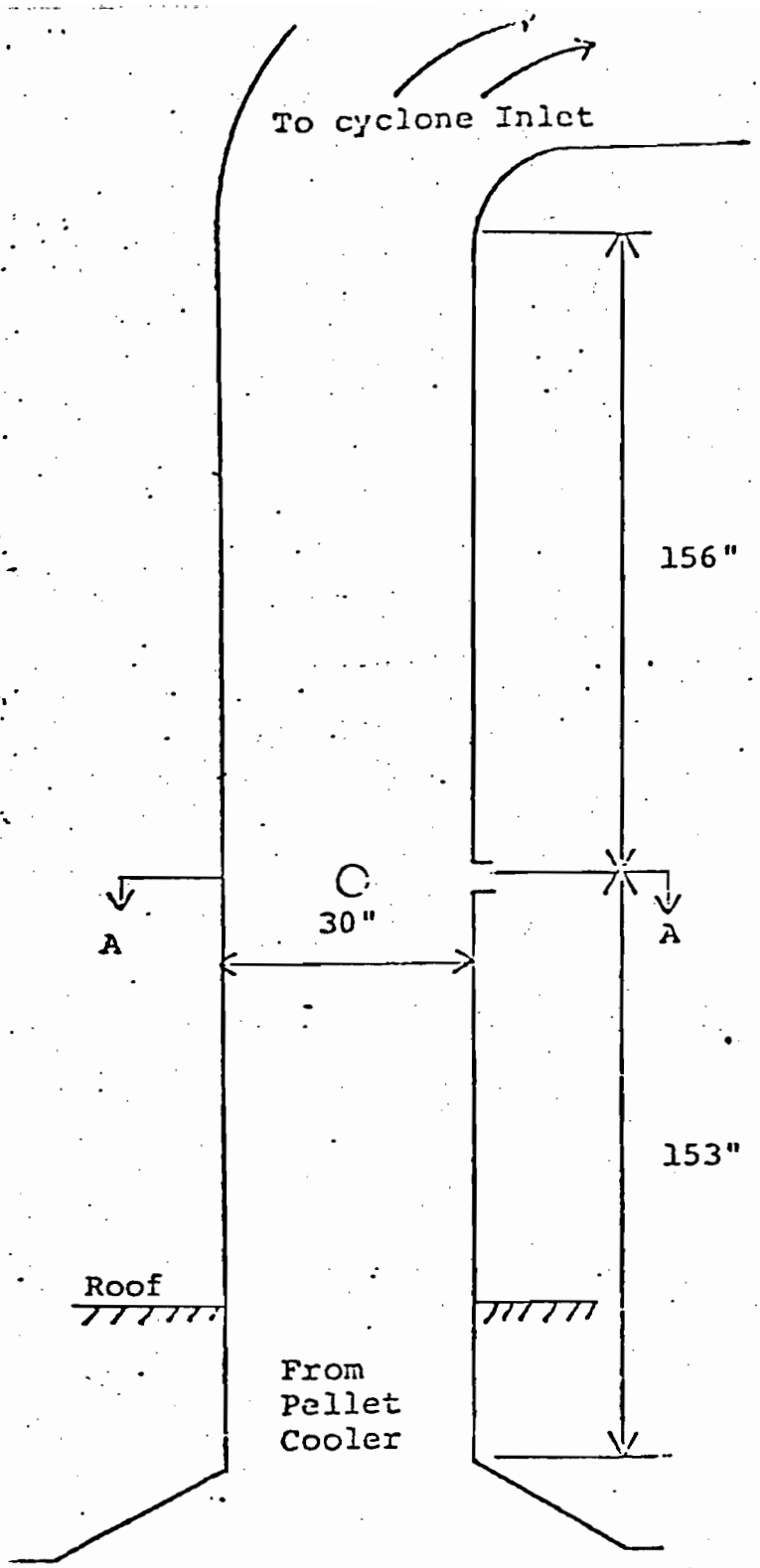
Tyler Screen Size	% Retained
8	5.5
24	58.5-65.0
42	85.5-87.5

The addition of the cyclone extension did not apparently affect the air flow through the process.

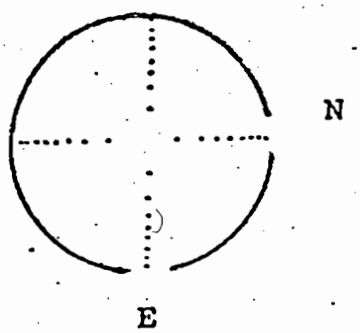
VI. LOCATION OF SAMPLING POINTS

Figures 4, 5, and 6 show the sampling ports and the number of sampling points at the sites used to determine emissions from these two operations. As shown in Figure 4, the pellet cooler cyclone inlet samples were collected at 32 points (16 along each diameter) in the 30 inch round vertical duct. This port was 5.1 diameters upstream from the bend leading into the cyclone and 5.2 diameters downstream from the transition duct leading from the pellet cooler hood. Figure 5 shows the pellet cooler cyclone outlet sampling site and the 36 traverse points (18 along each diameter) in the 34.5 inch round vertical duct. This port was located in the temporary duct extension and was 3.33 diameters downstream from the transition section and bend (duct changed from rectangular to round), and 0.83 diameters upstream from the duct outlet.

Figure 6 shows the hammermill cyclone outlet site and the 16 points (8 along each diameter) in an 18 inch round vertical duct. The sampling ports were 2 diameters upstream from the duct exit and 4.7 diameters downstream from a bend.



Point	Distance to Traverse Point, I
1	1.0
2	1.5
3	2.6
4	3.8
5	5.1
6	6.6
7	8.5
8	11.3
9	18.8
10	21.5
11	23.4
12	24.9
13	26.3
14	27.5
15	28.5
16	29.0



Section AA

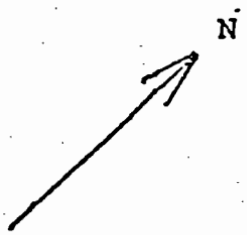


FIGURE 4. PELLET COOLER CYCLONE INLET SAMPLING LOCATION

Point	Distance to Traverse Point, In.
1	1.0
2	1.5
3	2.6
4	3.8
5	5.0
6	6.5
7	8.1
8	10.2
9	13.2
10	21.3
11	24.5
12	26.4
13	28.0
14	29.5
15	30.7
16	31.9
17	33.0
18	33.3

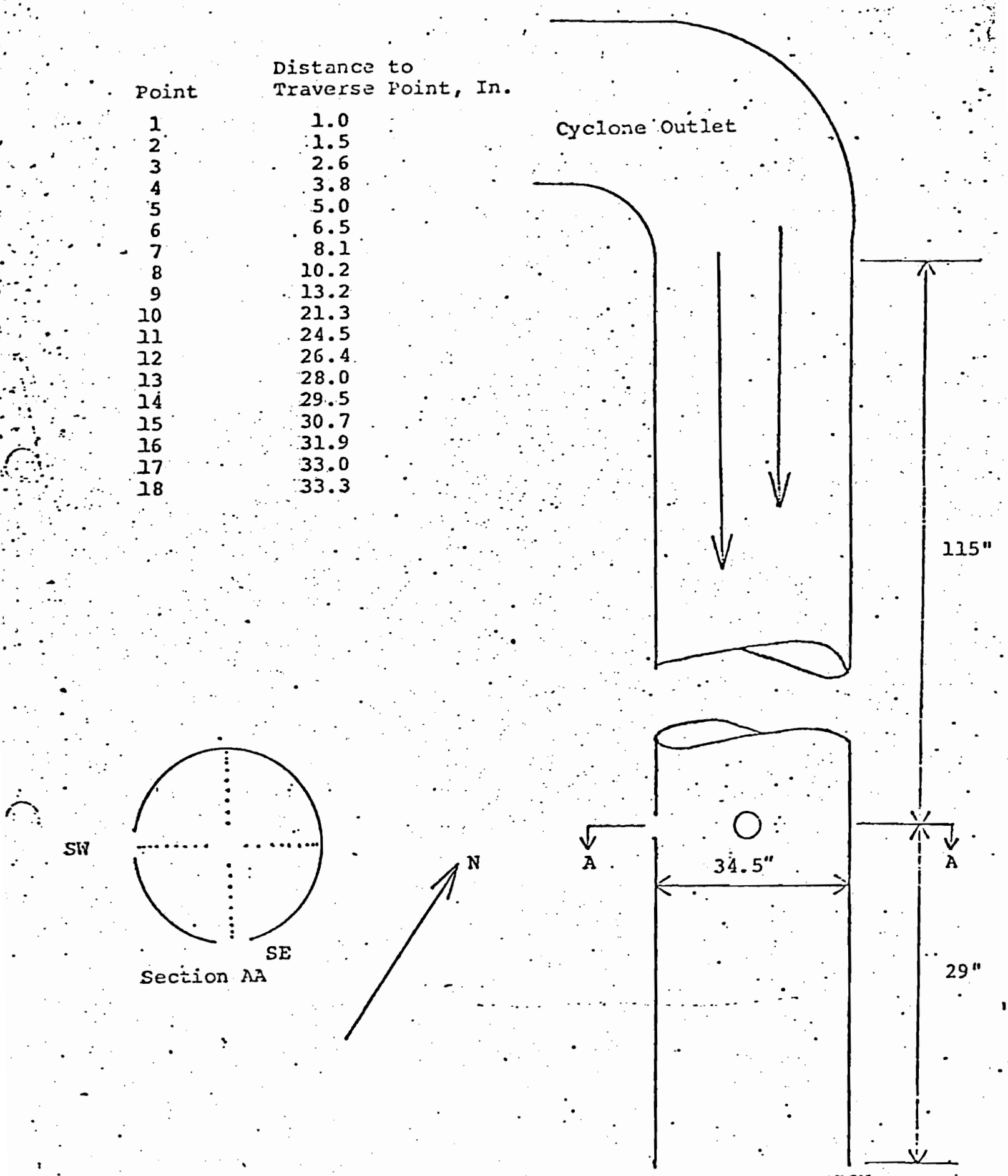


FIGURE 5. PELLET COOLER CYCLONE OUTLET SAMPLING LOCATION

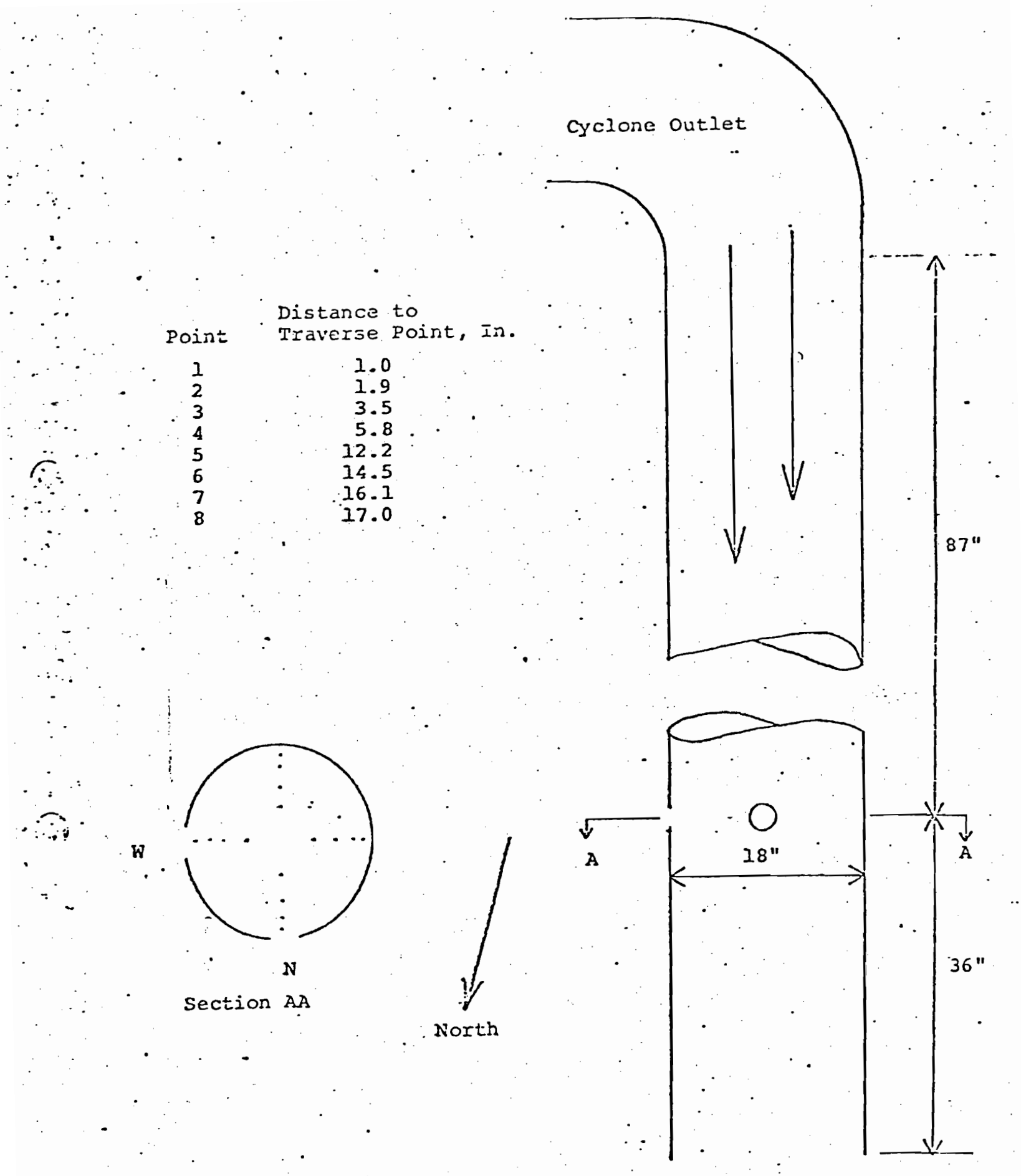


FIGURE 6. HAMMERMILL CYCLONE OUTLET SAMPLING LOCATION

VII. SAMPLING PROCEDURES

All sampling procedures were selected by EPA prior to field sampling. The analysis of collected samples was performed by PEDCo. Original data sheets and associated velocity and sampling volume calculations are included in Appendix D.

Velocity and Gas Temperature

All gas velocities were measured with a type S pitot tube and inclined draft gage. In all cases velocities were measured at each sampling point across the stack diameter to determine an average value according to procedures described in the Federal Register[1] - Method 1. Temperatures were measured by long stem dial thermometers.

Particulates

Method 5 as described in the Federal Register[1] was used to measure particulate matter. A glass lined probe, fiber glass filter, and impingers containing distilled water were used as shown in Figure 7. The fourth impinger contained silica gel. The sampling cyclone was not used except for Test 1. Due to low moisture content and near ambient stack gas temperature, probes and filters were not heated during the tests.

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1) Federal Register, Vol. 36, No. 247, Part II Dec. 23, 1971

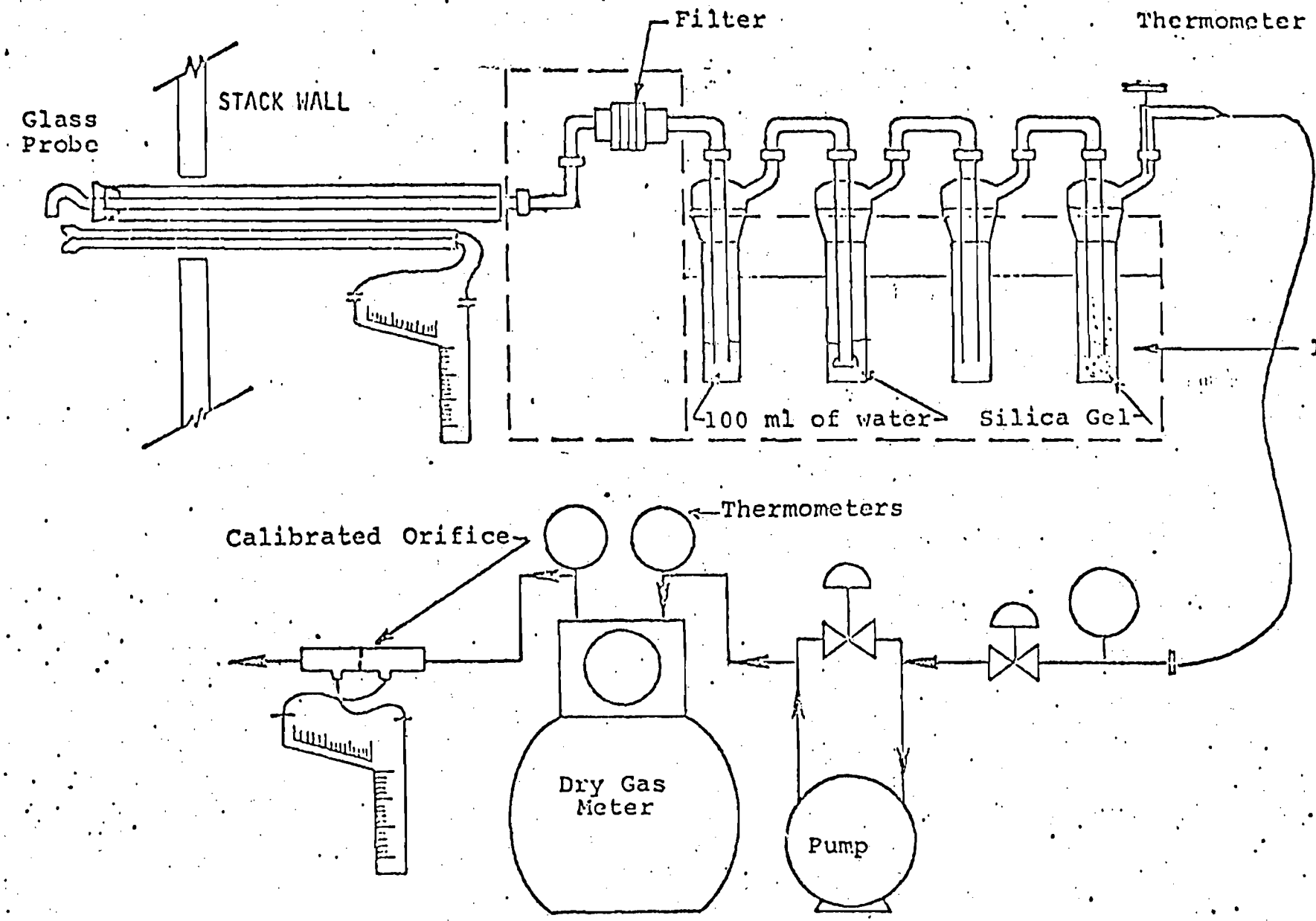


Figure 7. Particulate sampling train.

In all cases sampling was conducted under isokinetic conditions by continually monitoring the velocity with a pitot tube and adjusting the sampling rate accordingly with a three-independent-variable nomograph.

The train cleanup procedure consisted of measuring the water collected and weighing the silica gel to determine moisture content. The water was then poured into a glass jar. The filter was removed and placed in marked container. The probe and front half of the filter holder were then rinsed with analytical reagent grade acetone and the washings placed in a glass container. The rear half of the train consisting of filter holder, impingers, and connectors were rinsed with distilled water and this water added to the impinger contents. The rear half of the train was then rinsed with acetone and placed in a third sample jar. A portion of the acetone and distilled water used in the sample recovery, were set aside and used as blanks for analysis.

Analysis followed the procedures described in Method 5 of the Federal Register of August 17, 1971.[2] This consisted of:

1. Drying the filter in a desiccator at room temperature and weighing.

---

2. Federal Register, Vol. 36 No. 159 Part II, Aug. 17, 1971.

2. Transferring the acetone washings from the probe and front half of the filter holder to a tared beaker and evaporating to dryness at room temperature and weighing.

3. Extracting organics from the impinger water and washings with chloroform and ether. The extracts were placed in a tared beaker and dried at room temperature and then weighed.

4. The remaining water was placed in a tared beaker and evaporated by boiling. The residue was weighed.

5. Transferring the acetone washings from the rear half of the train to a tared beaker, evaporating to dryness at room temperature and weighing.

TRUCK RECEIVING SYSTEM

SECTION V

SUPPLEMENT 4

DESIGN DETAILS

The fan to be used is a New York Blower Co. No. 228 PLR and is to deliver 9119 cfm. The bag filter to be used is a Flexkleen model 100 WRS-64 with a cloth area of 960 square feet. Therefore, the air to cloth ratio is calculated as:

$$\text{A/C ratio} = \frac{9119}{960} = 9.49 \frac{\text{cfm}}{\text{s.f.}}$$

TRUCK RECEIVING SYSTEM

SECTION V

SUPPLEMENT 5-a

DERIVATION OF CONTROL DEVICE EFFICIENCY

We have not derived the control device efficiency, but have attached a letter from Aircon Corporation, the dust control system subcontractor for this job. The bag filter efficiency is stated in the letter as being 99 percent.

TRUCK RECEIVING SYSTEM

SECTION V

SUPPLEMENT 5-b

(Letter from Aircon Corporation)

Aircon
CORPORATION

PNEUMATIC CONVEYING SYSTEMS
DESIGNERS - FABRICATORS - ERECTORS

September 17, 1979

Younglove Construction Company
P.O. Box 1768
Sioux City, Iowa 51102

Attn: Mr. Bill Bradbury

Dear Bill:

Enclosed is the information for the dust control system at Cargill Company, Jacksonville, Florida.

Under Section II, the cost break-downs are approximately as follows:

Item # 4	-	$ 26,000.00
Item # 5	-	$ 16,350.00
Item # 59	-	$ 15,000.00
Item #114	-	$ 12,000.00
Pellet Coolers		$ 22,500.00

The above figures include equipment by Aircon only, please add the equipment to be furnished by Younglove.

Under Section III, the efficiency of the control devices are 99% efficient on collected particles of 5 microns and larger.

Under Section V, paragraph 2, I am unable to give an accurate figure of emission since I am not familar with the input rate or proposed operating conditions.

Paragraph 4:

Item # 4	-	9119 ACFM - 960 square feet of cloth 9.49 A/C ratio
Item # 15	-	4385 ACFM - 480 square feet of cloth 9.13 A/C ratio
Item # 59	-	3353 ACFM - 360 square feet of cloth 9.31 A/C ratio
Item #114	-	1547 ACFM - 160 square feet of cloth 9.67 A/C ratio

Paragraph 5:

Same as paragraph 2

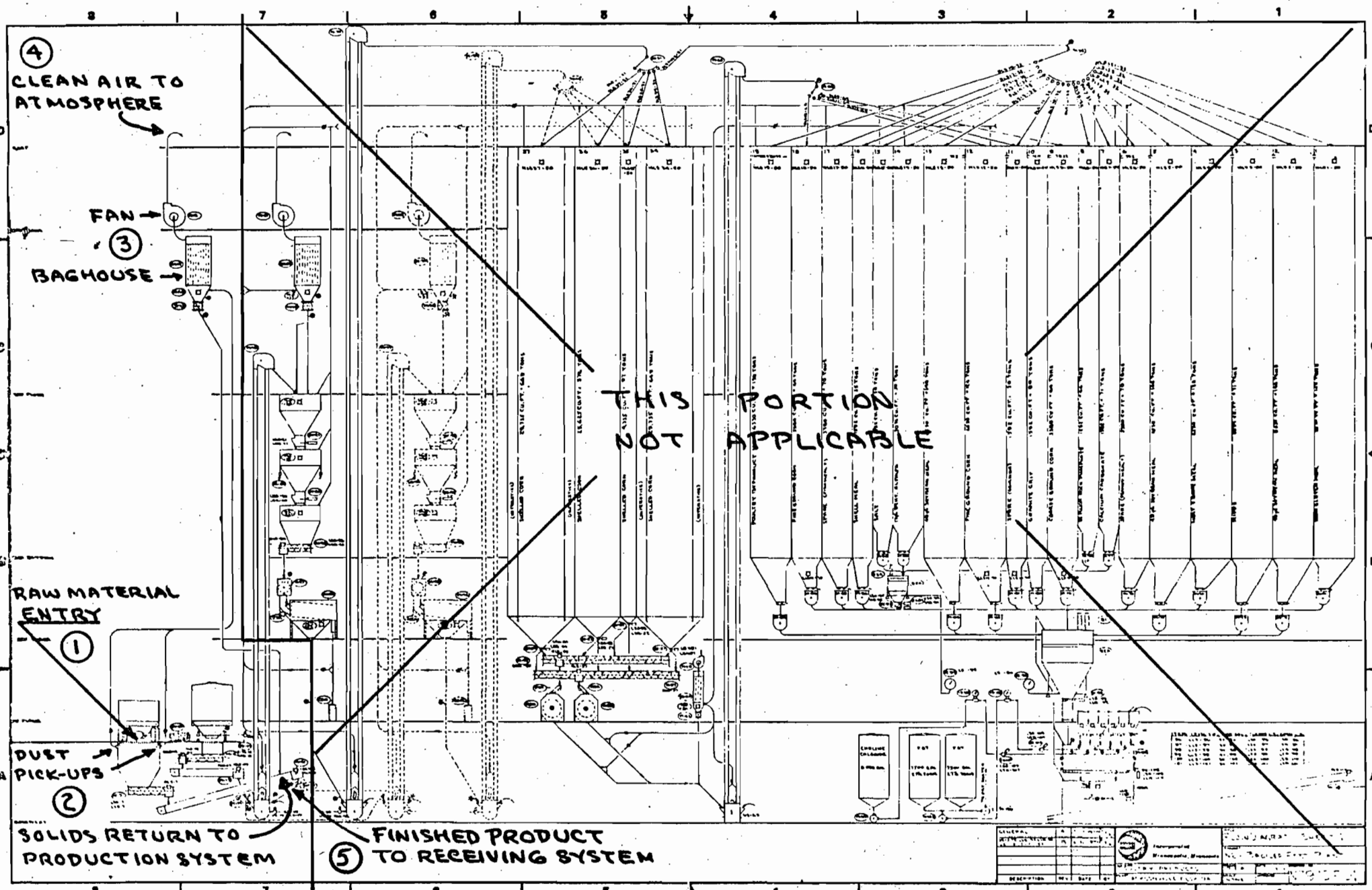
Bill, I hope the above information will be some assistance to you. Should you have any questions, please give me a call.

Sincerely,

AIRCON CORPORATION

Fred Edmaiston

FE/jjd



FLOW DIAGRAM - TRUCK RECEIVING SYSTEM

SECTION V

SUPPLEMENT 6-b

DESCRIPTION

TRUCK RECEIVING SYSTEM

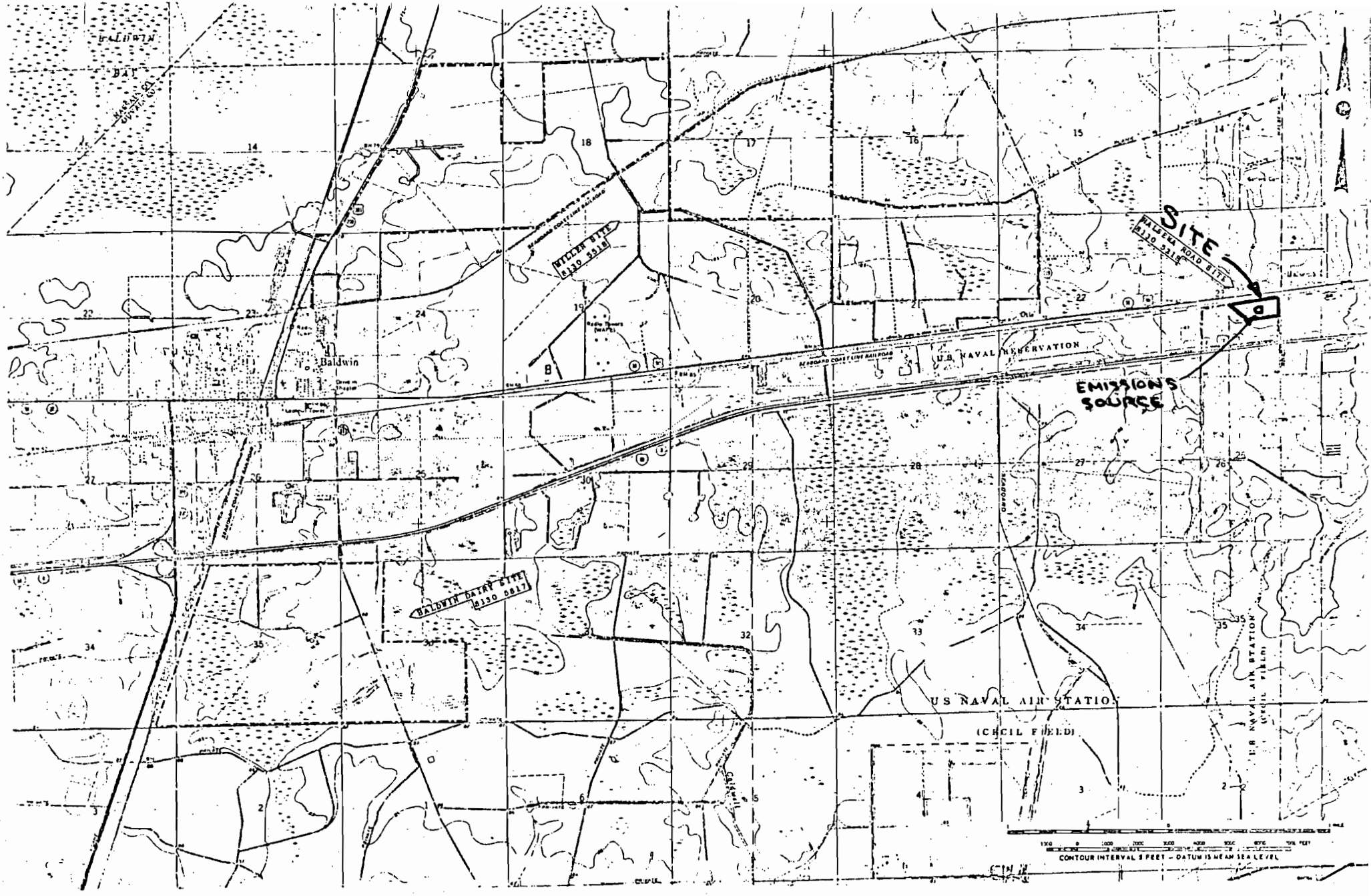
1. Raw material (grain and other feed ingredients) is received into hopper from self-unloading trucks in a completely enclosed receiving building.

2. Dust pick-up hoods prevent dust emissions into receiving building.

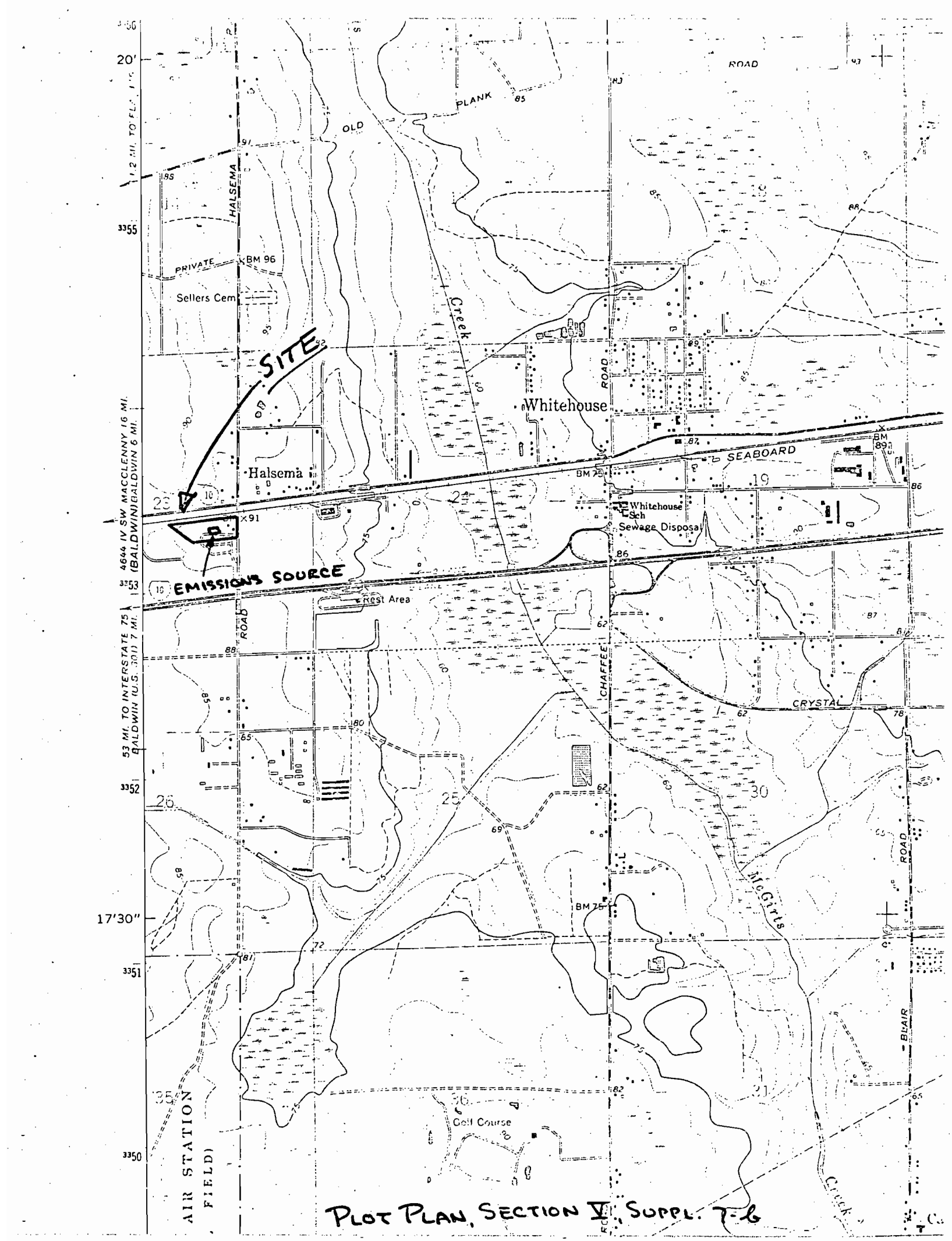
3. Fan and reverse jet cleaning tubular cloth filter (bag house) provide air movement and separation of particulate matter (dust) from air.

4. Clean air is discharged to atmosphere.

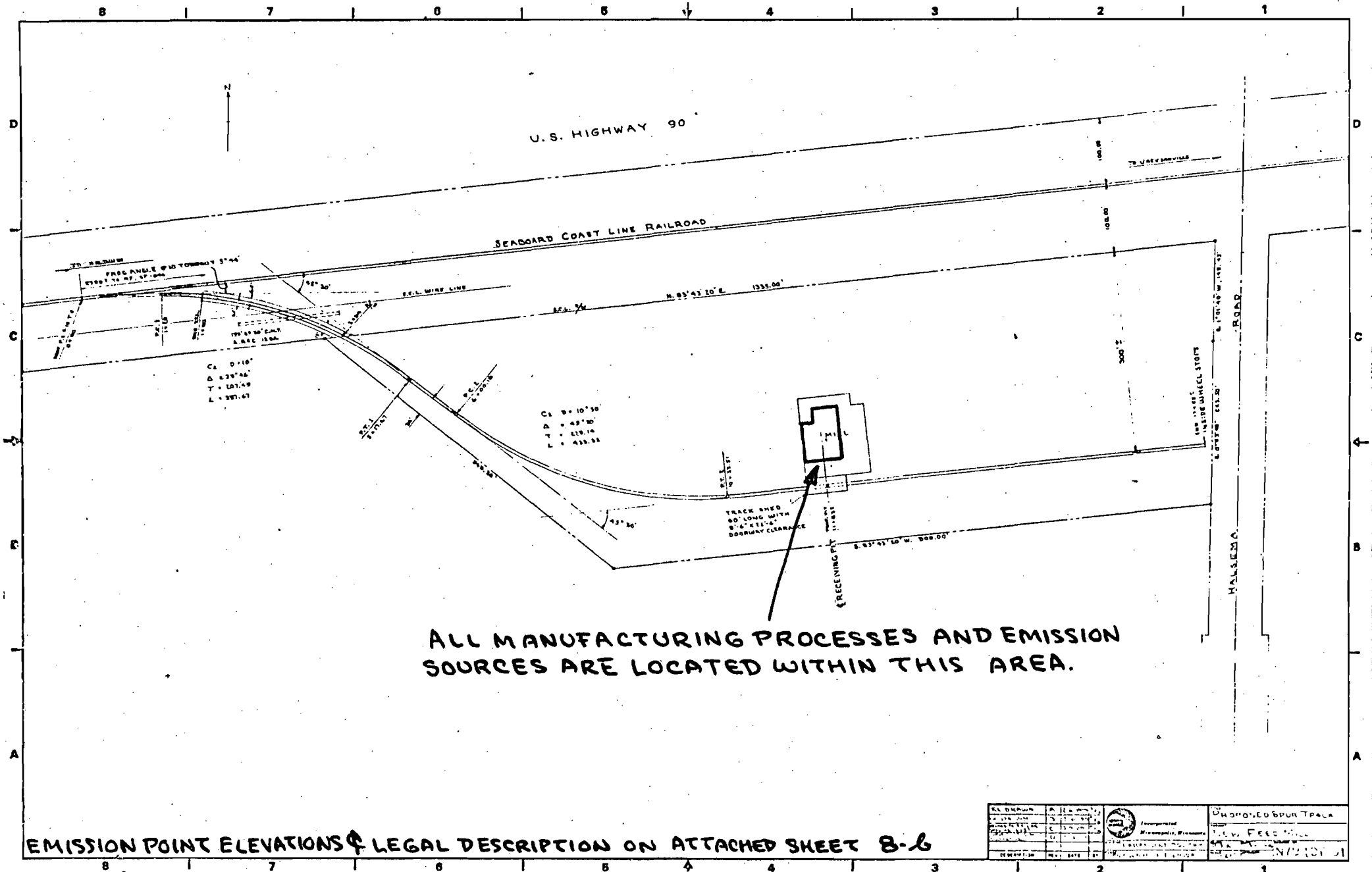
5. Finished product is discharged to receiving system.



PLOT PLAN, SECTION V, SUPPL. 7a



PLOT PLAN, SECTION V, SUPPL. 7-6



EMISSION POINT ELEVATIONS & LEGAL DESCRIPTION ON ATTACHED SHEET 8-b

PLOT PLAN OF FACILITY

SECTION V, SUPPL. 8-a

SECTION V

SUPPLEMENT 8-b

EMISSION POINTS

1. All emission points are located within a 40' X 40' area on top the mill tower.

2. All emission points are located at:

   Elevation 114 feet above grade
   (mean sea level elevation = 206 feet)

LEGAL DESCRIPTION OF SITE

THAT CERTAIN TRACT OR PARCEL OF LAND BEING A PART OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 23, TOWNSHIP 2 SOUTH, RANGE 24 EAST, AND A PART OF LOT 1 AND THE 15 FOOT ROADWAY, LYING EASTERLY THEREOF IN THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 23, ACCORDING TO PLAT OF JACKSONVILLE FARMS, RECORDED IN PLAT BOOK 3, PAGE 41 OF THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS BEGINNING AT THE INTERSECTION OF THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF SEABORAD COAST LINE RAILROAD WITH THE WESTERLY RIGHT-OF-WAY LINE OF HALSEMA ROAD: THENCE SOUTH 83° 43' 20" WEST, ALONG THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF SAID SEABOARD COAST LINE RAILROAD, 1335 FEET: THENCE SOUTH 50° 58' EAST, 548.3 FEET: THENCE NORTH 83° 43' 20" EAST, AND PARALLEL WITH THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF SAID SEABOARD COAST LINE RAILROAD, 900 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF SAID HALSEMA ROAD; THENCE NORTH 0° 53' 40" EAST, ALONG SAID RIGHT-OF-WAY LINE, 243.5 FEET: THENCE CONTINUE ALONG SAID RIGHT-OF-WAY LINE, NORTH 1° 01' 40" EAST, 149.43 FEET TO THE POINT OF BEGINNING. CONTAINING 10 ACRES MORE OR LESS.

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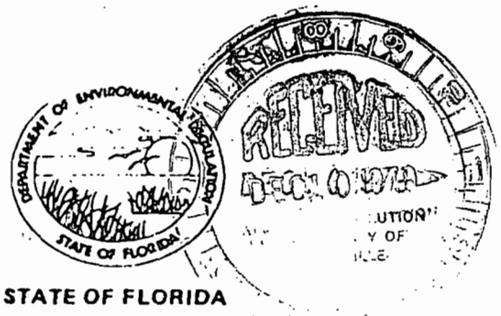

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

SOURCE TYPE: Air Pollution (X) New[1] ( ) Existing[1]

APPLICATION TYPE: (X) Construction ( ) Operation ( ) Modification

COMPANY NAME: Cargill, Incorporated COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi-Scrubber; Peeking Unit No. 2, Gas Fired) Feed Mixing System with Baghouse

SOURCE LOCATION: Street 112 Halsema Road City Jacksonville

UTM: East 7416,000 m North 3350,000 m

Latitude 30 ° 18 ' 20 "N Longitude 81 ° 52 ' 30 "W

APPLICANT NAME AND TITLE Robert B. Wellman, Vice President

APPLICANT ADDRESS P.O. Box 9300 Minneapolis, Minnesota 55440

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Cargill, Incorporated

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

Signed: Robert B. Wellman

Robert B. Wellman, Vice President
Name and Title (Please Type)

*Attach letter of authorization Date: 11/7/79 Telephone No. 612-475-6346

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: Maclyn B. Clancy

Maclyn B. Clancy, P.E.
Name (Please Type)

(Affix Seal)

N/A
Company Name (Please Type)

3105 Pierce Street, Sioux City, Iowa 51104
Mailing Address (Please Type)

Florida Registration No. 28668 Date: Nov 1, '79 Telephone No. 712-277-3906

[1] See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Dust control for feed mixing system (see attached flow diagram and system description). Project will result in full compliance.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction 7/2/1979 (1) Completion of Construction 12/1/1980

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Total estimated cost for system including all labor, materials, and electrical at $14,800.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

NONE

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ___Yes X No

F. Normal equipment operating time: hrs/day 16 ; days/wk 5 ; wks/yr 52 ; if power plant, hrs/yr N/A ; if seasonal, describe:
Based upon facility design data, this system will be in operation a maximum of 2,823 hours/year during the normal equipment operating time as shown above.

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant?	No
a. If yes, has "offset" been applied?	-
b. If yes, has "Lowest Achievable Emission Rate" been applied?	-
c. If yes, list non-attainment pollutants.	
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.	NO (2)
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI & VII.	NO (2)
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?	NO
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source?	NO

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable. (1.) Facility construction began on July 2, 1979; air pollution control system construction is scheduled to begin April 14, 1980. (2) See Section II-G supplement.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants Type	% Wt	Utilization Rate - lbs/hr	Relate to Flow Diagram
Poultry Feed	Feed Dust	0.0044	120,000	Entry Point (1)

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 120,000

2. Product Weight (lbs/hr): 119,999.95

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission[1] Maximum lbs/hr	Actual T/yr	Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential[4] Emission lbs/hr	T/yr	Relate to Flow Diagram
Feed Dust	0.053	0.0749	Process Weight	33.33	5.30	7.49	Points 1-7

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns)[5]	Basis for Efficiency (Sec.V,It5)
Flex Kleen Model 84 BVS-16 bag filter	feed dust	99%	5 microns & larger	Manufacturers Experience

[1]See Section V, Item 2.
[2]Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E.(1), F.A.C. -- 0.1 pounds per million BTU heat input)
[3]Calculated from operating rate and applicable standard
[4]Emission, if source operated without control (See Section V, Item 3)
[5]If Applicable

E. Fuels NOT APPLICABLE

Type (Be Specific)	Consumption* avg/hr	max./hr	Maximum Heat Input (MMBTU/hr)

*Units Natural Gas,MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average NOT APPLICABLE Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

All collected solids are returned to process

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 114 ft. Stack Diameter: 0.75 ft.

Gas Flow Rate: 1547 ACFM Gas Exit Temperature: Ambient °F.

Water Vapor Content: 0 % Velocity: 58.4 FPS

THIS SHEET NOT APPLICABLE

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) ___

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (^oF)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ft. Stack Diameter _____ Stack Temp._____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velosity _____FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: ( ) Cyclone ( ) Wet Scrubber

( ) Afterburner ( ) Other (specify) _____

Brief description of operating characteristics of control devices: _____

_____

_____

_____

_____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

_____

_____

_____

_____

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight - show derivation.

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.,) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

( ) Yes (X) No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources? (If yes, attach copy)

( ) Yes (X) No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology

Contaminant	Rate or Concentration
Dust	99% removal efficiency

D. Describe the existing control and treatment technology (if any).

1. Control Device/System: NOT APPLICABLE
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: ^{o}F

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if neceaasry).

1.

a. Control Device: Cyclone collector

b. Operating Principles: Centrifugal forces

c. Efficiency*: 80 to 90% d. Capital Cost: Medium-high

e. Useful Life: 10 years f. Operating Cost: Medium

g. Energy*: Fan & Airlock h. Maintenance Cost: Medium

i. Availability of construction materials and process chemicals: Cyclone collectors are manufactured by several companies.

j. Applicability to manufacturing processes: For small dust particles, efficiencies are not the best.

k. Ability to construct with control device, install in available space, and operate within proposed levels: Could be incorporated into design, but would take up much more space and not comply with proposed levels of control .

2.

a. Control Device: Gravity settling chamber

b. Operating Principles: Reduction in air stream velocity, allowing gravitational sedimentation.

c. Efficiency*: 50% (1) d. Capital Cost: Medium - high

e. Useful Life: 10 years f. Operating Cost: Low

g. Energy**: Fan & airlocks h. Maintenance Costs: Low

i. Availability of construction materials and process chemicals. Could be purchased from several sources.

j. Applicability to manufacturing processes:

Very limited in feed industry.

k. Ability to construct with control device, install in available space, and operate within proposed levels:

Would require unreasonably large units and not operate within proposed efficiency levels.

*Explain method of determining efficiency.
**Energy to be reported in units of electrical power - KWH design rate.

(1) "Environmental Controls for Feed Manufacturing and Grain Handling" American Feed Manufacturers Association - T.E. Stivers Organization, 1971.

3.

a. Control Device: Louver collector

b. Operating Principles: Centrifugal forces are applied to particles by rapidly changing the direction of flow with a series of plates set at an angle. Coarser particles traverse the air stream and are kicked back into the dirty side by the rebound vector and aerodynamic spin of impact.

c. Efficiency*: 80% d. Capital Cost: Low

e. Life: 10 years f. Operating Cost: Low

g. Energy: Fan h. Maintenance Cost: Low

i. Availability of construction materials and process chemicals: Not certain as to the availability of louver manufacturers.

j. Applicability to manufacturing processes: Limited

k. Ability to construct with control device, install in available space and operate within proposed levels: Could more conveniently construct with this device, but probably not obtain desired levels of pollutant removal.

4.

a. Control Device High energy centrifugal.

b. Operating Principles: Centrifugal forces, secondary gas streams, and spiral action.

c. Efficiency*: 80 to 90% (1) d. Capital Cost: Medium-High

e. Life: 10 years f. Operating Cost: High

g. Energy: Greater energy requirements than most methods h. Maintenance Cost: High

i. Availability of construction materials and process chemicals: Not certain as to the availability.

j. Applicability to manufacturing processes: Could be incorporated.

k. Ability to construct with control device, install in available space, and operate within proposed levels: Could do all except obtain desired level of pollutant removal.

F. Describe the control technology selected:

1. Control Device: Fabric bag filter

2. Efficiency*: 99% (manufacturer) 3. Capital Cost: $14,800

4. Life: 10 years 5. Operating Cost: High

6. Energy: Fan and airlocks 7. Maintenance Cost: High

8. Manufacturer: Flexkleen bag filter

9. Other locations where employed on similar processes:

a.

(1) Company: Country Pride, Inc.

(2) Mailing Address: Box 799, Easton, Maryland

(3) City: Hurlock (4) State: Maryland

(5) Environmental Manager: Dan Johnson, P.E.

(6) Telephone No. (301) 943-4811 Ext. 293

*Explain method of determining efficiency above.

(1) "Environmental Controls for Feed Manufacturing & Grain Handling", American Feed Manufacturers Association - T.E. Stivers Organization, 1971.

(7) Emissions:*

CONTAMINANT	RATE OR CONCENTRATION
Dust	Has not been tested as of this date.

(8) Process Rate:* Similar

b.

(1) Company: Boone Valley Coop Proc. Association

(2) Mailing Address: Eagle Grove, Iowa 50533

(3) City: Eagle Grove (4) State: Iowa

(5) Environmental Manager: E.G. Loux

(6) Telephone No: (515) 448-4711

(7) Emissions:*

CONTAMINANT	RATE OR CONCENTRATION
Dust	Has not bee tested as of this date.

(8) Process Rate:*

10. Reason for selection and description of systems:

The fabric type bag filter system which has been selected is the most widely used and accepted means of reducing dust emission levels from feedmills for meeting current levels of air quality standards.

Major components of the feed mixing system include:

1. Pick-up points at elevator boot, bag spout, and bin vents.
2. A model 84 BVS-16 Flexkleen reverse jet cleaning tubular cloth filter.
3. A model 8 x 6 Mac airlock.
4. A model 128 PLR New York Blower.
5. All associated duct work.

See Section V, supplement 6-a, and 6-b, for more information.

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

NOT APPLICABLE - See Supplement for Section II-G.

A. Company Monitored Data

1. _____no sites _____TSP ___( )SO_2* _____Wind spd/dir

Period of monitoring ____/__/____ to ____/__/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent?

___Yes ___No

b) Was instrumentation calibrated in accordance with Department procedures?

___Yes ___No ___Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____Year(s) of data from ____/__/____ to ____/__/____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

_____

4. Stability wind rose (STAR) data obtained from (location) _____

_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____grams/sec
SO_2	_____grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

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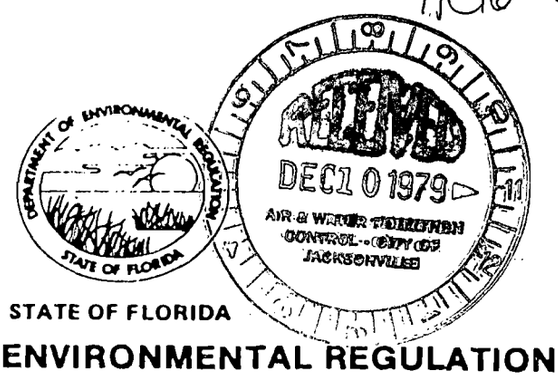

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

SOURCE TYPE: Air Pollution (X) New[1] ( ) Existing[1]

APPLICATION TYPE: (X) Construction ( ) Operation ( ) Modification

COMPANY NAME: Cargill, Incorporated COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Pellet cooling system with cyclone collector

SOURCE LOCATION: Street 112 Halsema Road City Jacksonville

UTM: East 7416,000 m North 3350,000 m

Latitude 30 ° 18 ' 20 "N Longitude 81 ° 52 ' 30 "W

APPLICANT NAME AND TITLE Robert B. Wellman, Vice President

APPLICANT ADDRESS P.O. Box 9300 Minneapolis, Minnesota 55440

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Cargill, Incorporated

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

Signed: Robert B. Wellman

Robert B. Wellman, Vice President
Name and Title (Please Type)

*Attach letter of authorization Date: 11/7/79 Telephone No. 612-475-6346

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: Maclyn B. Clancy

Maclyn B. Clancy, P.E.
Name (Please Type)

(Affix Seal)

N/A
Company Name (Please Type)

3105 Pierce St., Sioux City Iowa 51104
Mailing Address (Please Type)

Florida Registration No. 28668 Date: Nov. 1, 79 Telephone No. (712) 277-3906

[1] See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Product cooling and dust control for feed pelleting system.

Project will result in full compliance

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction 7/2/1979 (1) Completion of Construction 12-1-1980

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Total estimated cost for system including all labor, materials, electrical

at $52,600.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

NONE

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ___Yes x No

F. Normal equipment operating time: hrs/day 16 ; days/wk 5 ; wks/yr 52 ; if power plant, hrs/yr N/A ; if seasonal, describe:

Based upon facility design data, this system will be in operation

a maximum of 3,445 hours/year, during the normal equipment operating time as shown above.

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant?	NO
a. If yes, has "offset" been applied?	-
b. If yes, has "Lowest Achievable Emission Rate" been applied?	-
c. If yes, list non-attainment pollutants.	
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.	NO (2)
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI & VII.	NO (2)
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?	NO
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source?	NO

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable. (1) Facility construction began on July 2, 1979; air pollution control system construction is scheduled to begin April 14, 1980.

(2) See Section II-G supplement.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants Type	% Wt	Utilization Rate - lbs/hr	Relate to Flow Diagram
Poultry Feed	Dust	0.136	80,000	Entry Point (1)
Steam			4,000	Entry Point (8)

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 80,000

2. Product Weight (lbs/hr): 79,989.15

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission[1] Maximum lbs/hr	Actual T/yr	Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential[4] Emission lbs/hr	T/yr	Relate to Flow Diagram
Feed Dust	10.85	18.69	Process weight	31.23	108.53	186.93	Points 1-8

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec.V,It
CEA-Carter Day Co 120 "HV" Cyclone	Feed Dust	90%	10 to 20 microns & larger (1)	Manufacture Experience

[1]See Section V, Item 2.
[2]Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E.(1), F.A.C. -- 0.1 pounds per million BTU heat input)
[3]Calculated from operating rate and applicable standard
[4]Emission, if source operated without control (See Section V, Item 3)
[5]If Applicable

(1) From "Environmental Controls for Feed Manufacturing & Grain Handling" American Feed Manufacturers Association & The T.E. Stivers Organization, 1971.

E. Fuels NOT APPLICABLE

Type (Be Specific)	Consumption* avg/hr	max./hr	Maximum Heat Input (MMBTU/hr)

*Units Natural Gas,MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur:_____ Percent Ash:_____

Density:_____lbs/gal Typical Percent Nitrogen:_____

Heat Capacity:_____BTU/lb _____BTU/gal

Other Fuel Contaminants (which may cause air pollution):_____

F. If applicable, indicate the percent of fuel used for space heating.
NOT APPLICABLE

Annual Average_____ Maximum_____

G. Indicate liquid or solid wastes generated and method of disposal.

All collected solids are returned to process.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 114 ft. Stack Diameter: 3.5 ft.

Gas Flow Rate: 31,653 ACFM Gas Exit Temperature: 10 °F. greater than ambient

Water Vapor Content: 2.5 % Velocity: 54.8 FPS

THIS SHEET NOT APPLICABLE

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) ___

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (^oF)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ft. Stack Diameter _____ Stack Temp._____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velosity _____FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: ( ) Cyclone ( ) Wet Scrubber

( ) Afterburner ( ) Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight - show derivation.

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.,) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

( ) Yes (X) No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources? (If yes, attach copy)

( ) Yes (X) No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
Feed Dust	90% removal efficiency

D. Describe the existing control and treatment technology (if any).

1. Control Device/System: NOT APPLICABLE
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: ^{o}F

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if neceaasry).

1.

a. Control Device: Low pressure cyclone collector

b. Operating Principles: Centrifugal forces

c. Efficiency*: 80% d. Capital Cost: Medium

e. Useful Life: 10 years f. Operating Cost: Low

g. Energy*: Fan & Airlock h. Maintenance Cost: Low

i. Availability of construction materials and process chemicals: Manufactured by several companies

j. Applicability to manufacturing processes: Good

k. Ability to construct with control device, install in available space, and operate within proposed levels: May be marginal for meeting proposed levels.

2.

a. Control Device: Gravity settling chamber

b. Operating Principles: Reduction in air stream velocity, allowing gravitational sedimentation.

c. Efficiency*: 50% (1) d. Capital Cost: Medium-High

e. Useful Life: 10 years f. Operating Cost: Low

g. Energy**: Fan & airlocks h. Maintenance Costs: Low

i. Availability of construction materials and process chemicals. Could be purchased from several sources.

j. Applicability to manufacturing processes: Very limited to feed industry

k. Ability to construct with control device, install in available space, and operate within proposed levels: Would require unreasonably large units and not operate within proposed efficiency levels.

*Explain method of determining efficiency.
**Energy to be reported in units of electrical power - KWH design rate.

(1) "Environmental Controls for Feed Manufacturing and Grain Handling" American Feed Manufacturers Association - T.E. Stivers Organization, 1971.

3.

a. Control Device: Louver collector

b. Operating Principles: Centrifugal forces are applied to particles by rapidly changing the direction of flow with a series of plates set at an angle. Coarser particles traverse the air stream and are kicked back into the dirty side by the rebound vector and aerodynamic spin of impact.

c. Efficiency*: 80% d. Capital Cost: Low

e. Life: 10 years f. Operating Cost: Low

g. Energy: Fan h. Maintenance Cost: Low

i. Availability of construction materials and process chemicals: Not certain as to the availability of louver manufacturers.

j. Applicability to manufacturing processes: Limited

k. Ability to construct with control device, install in available space and operate within proposed levels: Could more conveniently construct with this device, but probably not obtain desired levels of pollutant removal.

4.

a. Control Device High energy centrifugal.

b. Operating Principles: Centrifugal forces, secondary gas streams, and spiral action.

c. Efficiency*: 80 to 90% (1) d. Capital Cost: Medium-High

e. Life: 10 years f. Operating Cost: High

g. Energy: Greater energy requirements than most methods h. Maintenance Cost: High

i. Availability of construction materials and process chemicals: Not certain as to the availability.

j. Applicability to manufacturing processes: Could be incorporated.

k. Ability to construct with control device, install in available space, and operate within proposed levels: Could do all except obtain desired level of pollutant removal.

F. Describe the control technology selected:

1. Control Device: High efficiency centrifugal

2. Efficiency*: 90% (manufacturer) 3. Capital Cost: $52,600

4. Life: 10 years 5. Operating Cost: Medium

6. Energy: Fan and airlocks 7. Maintenance Cost: Medium

8. Manufacturer: CEA Carter Day Co., 500 Seventy Third Ave., N.E. Minneapolis, Minnesota 55432

9. Other locations where employed on similar processes:

a.

(1) Company: Country Pride, Inc.

(2) Mailing Address: Box 799, Easton, Maryland

(3) City: Hurlock (4) State: Maryland

(5) Environmental Manager: Dan Johnson, P.E.

(6) Telephone No. (301) 943-4811 Ext. 293

*Explain method of determining efficiency above.

(1) "Environmental Controls for Feed Manufacturing & Grain Handling", American Feed Manufacturers Association - T.E. Stivers Organization, 1971.

(7) Emissions:*

CONTAMINANT	RATE OR CONCENTRATION
Dust	Has not been tested as of this date.

(8) Process Rate:* Similar

b.

(1) Company: Boone Valley Coop Proc. Association

(2) Mailing Address: Eagle Grove, Iowa 50533

(3) City: Eagle Grove (4) State: Iowa

(5) Environmental Manager: E.G. Loux

(6) Telephone No: (515) 448-4711

(7) Emissions:*

CONTAMINANT	RATE OR CONCENTRATION
Dust	Has not been tested as of this date.

(8) Process Rate:*

10. Reason for selection and description of systems:

For a pellet cooling system in which large volumes of moist air are handled, a high efficiency centrifugal collector is the most widely used and acceptable means for reducing dust emission levels from feedmills for meeting current levels of air quality standards.

Major components of the pellet cooling system include:

1. Pick-ups at pellet cooler, elevator boot, and bin vents.
2. a CEA Carter Day 120 "HV" cyclone collector.
3. A model 10 x 8 Sprout Waldron airlock.
4. A New York Blower Co. Model 408 PLR fan.
5. All associated duct work

See Section V, supplement 6-a, and 6-b, for more information.

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

NOT APPLICABLE _ See Supplement for Section II-G.

A. Company Monitored Data

1. _____no sites _____TSP ____( )SO_2* _____Wind spd/dir

Period of monitoring ____/__/____ to ____/__/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent?

___Yes ___No

b) Was instrumentation calibrated in accordance with Department procedures?

___Yes ___No ___Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____Year(s) of data from ____/__/____ to ____/__/____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

_____

4. Stability wind rose (STAR) data obtained from (location) _____

_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____grams/sec
SO_2	_____grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

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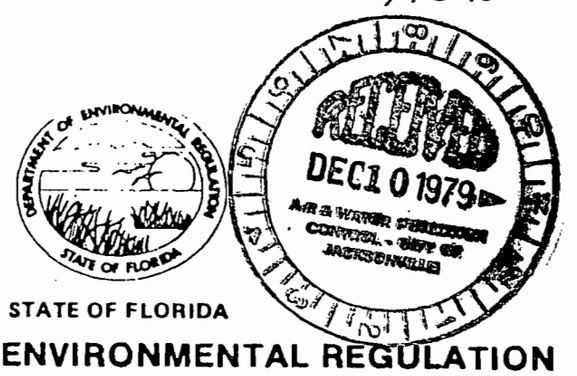

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

SOURCE TYPE: Air Pollution (x) New[1] ( ) Existing[1]

APPLICATION TYPE: (X) Construction ( ) Operation ( ) Modification

COMPANY NAME: Cargill, Incorporated COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) grain grinding system with baghouse

SOURCE LOCATION: Street 112 Halsema Road City Jacksonville

UTM: East 7416,000 m. North 3350,000 m.

Latitude 30 ° 18 ' 20 "N Longitude 81 ° 52 ' 30 "W

APPLICANT NAME AND TITLE Robert B. Wellman, Vice President

APPLICANT ADDRESS PO Box 9300, Minneapolis, Minnesota 55440

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Cargill, Incorporated

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

Signed: Robert B. Wellman

Robert B. Wellman, Vice President
Name and Title (Please Type)

*Attach letter of authorization Date: 12/7/79 Telephone No. 612-475-6346

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: Maclyn B. Clancy

Maclyn B. Clancy, P.E.
Name (Please Type)

(Affix Seal)

N/A
Company Name (Please Type)

3105 Pierce St., Sioux City, Iowa 51104
Mailing Address (Please Type)

Florida Registration No. 28668 Date: Nov. 1, '79 Telephone No. 712-277-3906

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Hammermill aspiration & dust control for grain grinding system (see attached flow diagram and system description). Project will result in full compliance.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction 7/1/1979 Completion of Construction 12/1/1980

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

The cost for all labor, materials, and electrical estimated to be $18,700.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

NONE

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ___Yes X No

F. Normal equipment operating time: hrs/day 16 ; days/wk 5 ; wks/yr 52 ; if power plant, hrs/yr N/A ; if seasonal, describe:
Based upon facility design data, this system will be in operation a maximum of 3256 hours/year during the normal equipment operating time as shown above.

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? NO
   a. If yes, has "offset" been applied? -
   b. If yes, has "Lowest Achievable Emission Rate" been applied? -
   c. If yes, list non-attainment pollutants.

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. NO (2)

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI & VII. NO (2)

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? NO

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? NO

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable. (1) Facility construction began on July 2, 1979; air pollution control system construction is scheduled to begin April 14, 1980.

(2) See Section II-G Supplement.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants Type	% Wt	Utilization Rate - lbs/hr	Relate to Flow Diagram
Ground Grain	Dust	0.018	64,000	Entry Point (1)

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 64,000

2. Product Weight (lbs/hr): 63,999.89

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission[1] Maximum lbs/hr	Actual T/yr	Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential[4] Emission lbs/hr	T/yr	Relate to Flow Diagram
Grain Dust	0.115	0.1872	Process Weight	30.14	11.5	18.72	Points 1-7

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec.V,It
Flexkleen Model 84 BVS-36 bag filter	Grain Dust	99%	5 microns & larger	Manufacture Experience

[1]See Section V, Item 2.
[2]Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E.(1), F.A.C. -- 0.1 pounds per million BTU heat input)
[3]Calculated from operating rate and applicable standard
[4]Emission, if source operated without control (See Section V, Item 3)
[5]If Applicable

E. Fuels NOT APPLICABLE

Type (Be Specific)	Consumption* avg/hr	max./hr	Maximum Heat Input (MMBTU/hr)

*Units Natural Gas,MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.
NOT APPLICABLE
Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

All collected solids are returned to process

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 114 ft. Stack Diameter: 1.167 ft.

Gas Flow Rate: 3353 ACFM Gas Exit Temperature: ~~Ambient~~ °F.

Water Vapor Content: 0 % Velocity: ~~52.2~~ FPS

THIS SHEET NOT APPLICABLE.

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) ___

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (^oF)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velosity _____FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: ( ) Cyclone ( ) Wet Scrubber

( ) Afterburner ( ) Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight - show derivation.

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.,) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

( ) Yes (X) No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources? (If yes, attach copy)

( ) Yes (XX) No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
Dust	99% removal efficiency.

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: ^{o}F

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if neceaasry).

1.

a. Control Device: Cyclone collector

b. Operating Principles: Centrifugal forces

c. Efficiency*: 80 to 90% d. Capital Cost: Medium-high

e. Useful Life: 10 years f. Operating Cost: Medium

g. Energy*: Fan & Airlock h. Maintenance Cost: Medium

i. Availability of construction materials and process chemicals: Cyclone collectors are manufactured by several companies

j. Applicability to manufacturing processes: For small dust particles, efficiencies are not the best.

k. Ability to construct with control device, install in available space, and operate within proposed levels: Could be incorporated into design, but would take up much more space and not comply with proposed levels of control .

2.

a. Control Device: Gravity settling chamber

b. Operating Principles: Reduction in air stream velocity, allowing gravitational sedimentation.

c. Efficiency*: 50% (1) d. Capital Cost: Medium - high

e. Useful Life: 10 years f. Operating Cost: Low

g. Energy**: Fan & airlocks h. Maintenance Costs: Low

i. Availability of construction materials and process chemicals. Could be purchased from several sources.

j. Applicability to manufacturing processes:

Very limited in feed industry.

k. Ability to construct with control device, install in available space, and operate within proposed levels:

Would require unreasonably large units and not operate within proposed efficiency levels.

*Explain method of determining efficiency.
**Energy to be reported in units of electrical power - KWH design rate.

(1) "Environmental Controls for Feed Manufacturing and Grain Handling" American Feed Manufacturers Association - T.E. Stivers Organization, 1971.

3.

a. Control Device: Louver collector

b. Operating Principles: Centrifugal forces are applied to particles by rapidly changing the direction of flow with a series of plates set at an angle. Coarser particles traverse the air stream and are kicked back into the dirty side by the rebound vector and aerodynamic spin of impact.

c. Efficiency*: 80% d. Capital Cost: Low

e. Life: 10 years f. Operating Cost: Low

g. Energy: Fan h. Maintenance Cost: Low

i. Availability of construction materials and process chemicals: Not certain as to the availability of louver manufacturers.

j. Applicability to manufacturing processes: Limited

k. Ability to construct with control device, install in available space and operate within proposed levels: Could more conveniently construct with this device, but probably not obtain desired levels of pollutant removal.

4.

a. Control Device High energy centrifugal.

b. Operating Principles: Centrifugal forces, secondary gas streams, and spiral action.

c. Efficiency*: 80 to 90% (1) d. Capital Cost: Medium-High

e. Life: 10 years f. Operating Cost: High

g. Energy: Greater energy requirements than most methods h. Maintenance Cost: High

i. Availability of construction materials and process chemicals: Not certain as to the availability.

j. Applicability to manufacturing processes: Could be incorporated.

k. Ability to construct with control device, install in available space, and operate within proposed levels: Could do all except obtain desired level of pollutant removal.

F. Describe the control technology selected:

1. Control Device: Fabric bag filter

2. Efficiency*: 99% (manufacturer) 3. Capital Cost: $18,700

4. Life: 10 years 5. Operating Cost: High

6. Energy: Fan and airlocks 7. Maintenance Cost: High

8. Manufacturer: Flexkleen bag filter

9. Other locations where employed on similar processes:

a.

(1) Company: Country Pride, Inc.

(2) Mailing Address: Box 799, Easton, Maryland

(3) City: Hurlock (4) State: Maryland

(5) Environmental Manager: Dan Johnson, P.E.

(6) Telephone No. (301) 943-4811 Ext. 293

*Explain method of determining efficiency above.

(1) "Environmental Controls for Feed Manufacturing & Grain Handling", American Feed Manufacturers Association - T.E. Stivers Organization, 1971.

(7) Emissions:*

CONTAMINANT	RATE OR CONCENTRATION
Dust	Has not been tested as of this date

(8) Process Rate:* Similar

b.

(1) Company: Boone Valley Coop Proc. Association

(2) Mailing Address: Eagle Grove, Iowa 50533

(3) City: Eagle Grove (4) State: Iowa

(5) Environmental Manager: E.G. Loux

(6) Telephone No: (515) 448-4711

(7) Emissions:*

CONTAMINANT	RATE OR CONCENTRATION
Dust	Has not been tested as of this date.

(8) Process Rate:*

10. Reason for selection and description of systems:

The fabric type bag filter system which has been selected is the most widely used and accepted feedmills for meeting current levels of air quality standards.

Major components of the grain grinding system include:

1. Pick-ups at the hammermill screens, elevator boot, and bin vents.
2. A Model 84 BVS-36 Flexkleen reverse jet cleaning tubular cloth filter.
3. A model 10 x 8 Mac airlock.
4. A model 158 PLR New York Blower.
5. All associated duct-work.

See section V, supplement 6-a, and 6-b, for more information.

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

NOT APPLICABLE. See supplement for Section II-G.

A. Company Monitored Data

1. _____no sites _____TSP ____( )SO_2* _____Wind spd/dir

Period of monitoring ____/__/____ to ____/__/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent?

___Yes ___No

b) Was instrumentation calibrated in accordance with Department procedures?

___Yes ___No ___Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____Year(s) of data from ____/__/____ to ____/__/____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

_____

4. Stability wind rose (STAR) data obtained from (location) _____

_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____grams/sec
SO_2	_____grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

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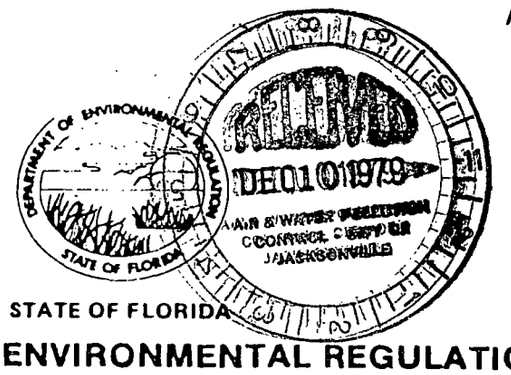
(16)



STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

SOURCE TYPE: Air Pollution (X) New[1] ( ) Existing[1]

APPLICATION TYPE: (X) Construction ( ) Operation ( ) Modification

COMPANY NAME: Cargill, Incorporated COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Truck receiving system with baghouse

SOURCE LOCATION: Street 112 Halsema Road City Jacksonville

UTM: East 7416,000 m. North 3350,000 m.

Latitude 30 ° 18 ' 20 "N Longitude 81 ° 52 ' 30 "W

APPLICANT NAME AND TITLE Robert B. Wellman, Vice President

APPLICANT ADDRESS P.O. Box 9300, Minneapolis, Minnesota 55440

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Cargill Incorporated

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

Signed: Robert B. Wellman

Robert B. Wellman, Vice President
Name and Title (Please Type)

*Attach letter of authorization Date: 11/7/79 Telephone No. 612-475-6346

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: Maclyn B. Clancy

Maclyn B. Clancy, P.E.
Name (Please Type)

(Affix Seal)

N/A
Company Name (Please Type)

3105 Pierce St., Sioux City, Iowa 51104
Mailing Address (Please Type)

Florida Registration No. 28668 Date: Nov 1, 79 Telephone No. 712 277-3906

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Dust control for truck receiving system (see attached flow diagram and system description) Project will result in full compliance.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction 7/2/1979 (1) Completion of Construction 12/1/1980

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Total estimated cost for system including all labor, materials and electrical at $34,800.00.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

None

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ___Yes _x_No

F. Normal equipment operating time: hrs/day 16 ; days/wk 5 ; wks/yr 52 ; if power plant, hrs/yr N/A ; if seasonal, describe:

Based upon facility design data, this system will be in operation a maximum of 519 hours/year, during the normal equipment operation time, as shown above.

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant?	No
a. If yes, has "offset" been applied?	-
b. If yes, has "Lowest Achievable Emission Rate" been applied?	-
c. If yes, list non-attainment pollutants.	
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.	No (2)
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI & VII.	No (2)
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?	No
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source?	No

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable. 1. Facility construction began on July 2, 1979; air pollution control system construction is scheduled to begin April 14, 1980.

 2. See Section II-G supplement.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants Type	% Wt	Utilization Rate - lbs/hr	Relate to Flow Diagram
Grain & Feed Ingredients	Dust	0.016	195,800	Entry Point (1)

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 195,800

2. Product Weight (lbs/hr): 195,799.69

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission[1] Maximum lbs/hr	Actual T/yr	Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential[4] Emission lbs/hr	T/yr	Relate to Flow Diagram
Grain & Feed dust	0.31	0.081	Process Weight	36.04	31.27	8.11	Points (1) - (5)

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns)[5]	Basis for Efficiency (Sec.V,It5)
Flex Kleen Model 100 WRS - 64 bag filter	Grain & Feed Dust	99%	5 microns & larger	Manufacturer Experience

[1]See Section V, Item 2.
[2]Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E.(1), F.A.C. -- 0.1 pounds per million BTU heat input)
[3]Calculated from operating rate and applicable standard
[4]Emission, if source operated without control (See Section V, Item 3)
[5]If Applicable

E. Fuels Not Applicable

Type (Be Specific)	Consumption* avg/hr	max./hr	Maximum Heat Input (MMBTU/hr)

*Units Natural Gas,MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average Not Applicable Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

All collected solids are returned to process

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 114 ft. Stack Diameter: 1.83 ft.

Gas Flow Rate: 9119 ACFM Gas Exit Temperature: Ambient °F.

Water Vapor Content: 0 % Velocity: 57.78 FPS

THIS SHEET IS NOT APPLICABLE

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) ___

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (^oF)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velosity _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: ( ) Cyclone ( ) Wet Scrubber

( ) Afterburner ( ) Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight - show derivation.

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.,) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

( ) Yes (X) No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources? (If yes, attach copy)

( ) Yes (X) No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
Dust	99% removal efficiency

D. Describe the existing control and treatment technology (if any).

Not Applicable

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: ^{o}F

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if neceaasry).

1.

a. Control Device: Cyclone collector

b. Operating Principles: Centrifugal forces

c. Efficiency*: 80 to 90% d. Capital Cost: Medium-high

e. Useful Life: 10 years f. Operating Cost: Medium

g. Energy*: Fan & Airlock h. Maintenance Cost: Medium

i. Availability of construction materials and process chemicals: Cyclone collectors are manufactured by several companies

j. Applicability to manufacturing processes: For small dust particles, efficiencies are not the best.

k. Ability to construct with control device, install in available space, and operate within proposed levels: Could be incorporated into design, but would take up much more space and not comply with proposed levels of control .

2.

a. Control Device: Gravity settling chamber

b. Operating Principles: Reduction in air stream velocity, allowing gravitational sedimentation.

c. Efficiency*: 50% (1) d. Capital Cost: Medium - high

e. Useful Life: 10 years f. Operating Cost: Low

g. Energy**: Fan & airlocks h. Maintenance Costs: Low

i. Availability of construction materials and process chemicals: Could be purchased from several sources.

j. Applicability to manufacturing processes:

Very limited in feed industry.

k. Ability to construct with control device, install in available space, and operate within proposed levels:

Would require unreasonably large units and not operate within proposed efficiency levels.

*Explain method of determining efficiency.
**Energy to be reported in units of electrical power - KWH design rate.

(1) "Environmental Controls for Feed Manufacturing and Grain Handling" American Feed Manufacturers Association - T.E. Stivers Organization, 1971.

3.

a. Control Device: Louver collector

b. Operating Principles: Centrifugal forces are applied to particles by rapidly changing the direction of flow with a series of plates set at an angle. Coarser particles traverse the air stream and are kicked back into the dirty side by the rebound vector and aerodynamic spin of impact.

c. Efficiency*: 80% d. Capital Cost: Low

e. Life: 10 years f. Operating Cost: Low

g. Energy: Fan h. Maintenance Cost: Low

i. Availability of construction materials and process chemicals: Not certain as to the availability of louver manufacturers.

j. Applicability to manufacturing processes: Limited

k. Ability to construct with control device, install in available space and operate within proposed levels: Could more conveniently construct with this device, but probably not obtain desired levels of pollutant removal.

4.

a. Control Device High energy centrifugal.

b. Operating Principles: Centrifugal forces, secondary gas streams, and spiral action.

c. Efficiency*: 80 to 90% (1) d. Capital Cost: Medium-High

e. Life: 10 years f. Operating Cost: High

g. Energy: Greater energy requirements than most methods h. Maintenance Cost: High

i. Availability of construction materials and process chemicals: Not certain as to the availability.

j. Applicability to manufacturing processes: Could be incorporated.

k. Ability to construct with control device, install in available space, and operate within proposed levels: Could do all except obtain desired level of pollutant removal.

F. Describe the control technology selected:

1. Control Device: Fabric bag filter

2. Efficiency*: 99% (manufacturer) 3. Capital Cost: $34,800

4. Life: 10 years 5. Operating Cost: High

6. Energy: Fan and airlocks 7. Maintenance Cost: High

8. Manufacturer: Flexkleen bag filter

9. Other locations where employed on similar processes:

a.

(1) Company: Country Pride, Inc.

(2) Mailing Address: Box 799, Easton, Maryland

(3) City: Hurlock (4) State: Maryland

(5) Environmental Manager: Dan Johnson, P.E.

(6) Telephone No. (301) 943-4811 Ext. 293

*Explain method of determining efficiency above.

(1) "Environmental Controls for Feed Manufacturing & Grain Handling", American Feed Manufacturers Association - T.E. Stivers Organization, 1971.

(7) Emissions:*

CONTAMINANT	RATE OR CONCENTRATION
Dust	Has not been tested as of this date.

(8) Process Rate:* Similar

b.

(1) Company: Boone Valley Coop Proc. Association

(2) Mailing Address: Eagle Grove, Iowa 50533

(3) City: Eagle Grove (4) State: Iowa

(5) Environmental Manager: E.G. Loux

(6) Telephone No: (515) 448-4711

(7) Emissions:*

CONTAMINANT	RATE OR CONCENTRATION
Dust	Has not been tested as of this date.

(8) Process Rate:* Similar

10. Reason for selection and description of systems:

The fabric type bag filter system which has been selected is the most widely used and accepted means of reducing dust emission levels from feedmills for meeting current levels of air quality standards. Major components of the truck receiving system include dust pick-up hoods at the truck receiving grate, a model 100 WRS-64 Flexkleen reverse jet cleaning tubular cloth filter, a model 12 x 10 Mac airlock, a model 228 PLR New York Blower, and all associated duct work. See Section V, Supplement, 6-a, and 6-b, for more information.

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

NOT APPLICABLE - See supplement for Section II-G.

A. Company Monitored Data

1. _____no sites _____TSP ____( )SO_2* _____Wind spd/dir

Period of monitoring ____/__/____ to ____/__/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent?

___Yes ___No

b) Was instrumentation calibrated in accordance with Department procedures?

___Yes ___No ___Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____Year(s) of data from ____/__/____ to ____/__/____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

_____

4. Stability wind rose (STAR) data obtained from (location) _____

_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____grams/sec
SO_2	_____grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

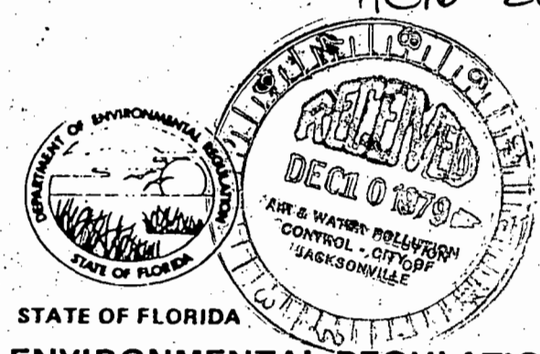
*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

AC16-26086

(16)



STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

SOURCE TYPE: Air Pollution [XX] New[1] [ ] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: Cargill, Incorporated COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) receiving system with baghouse

SOURCE LOCATION: Street 112 Halsema Road City Jacksonville

UTM: East 7416,000 m. North 3350,000 m

Latitude 30 ° 18 ' 20 "N Longitude 81 ° 52 ' 30 "W

APPLICANT NAME AND TITLE Robert B. Wellman, Vice President

APPLICANT ADDRESS P.O. Box 9300, Minneapolis, Minnesota 55440

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Cargill, Incorporated
I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

Signed: Robert B. Wellman

Robert B. Wellman, Vice President
Name and Title (Please Type)

*Attach letter of authorization Date: 11/7/79 Telephone No. 612-475-6346

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: Maclyn B. Clancy

Maclyn B. Clancy, P.E.
Name (Please Type)

(Affix Seal)

N/A
Company Name (Please Type)

3105 Pierce St., Sioux City, Iowa 51104
Mailing Address (Please Type)

Florida Registration No. 28668 Date: Nov. 1, 79 Telephone No. 712-277-3906

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II:- GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Dust control for receiving system (see attached flow diagram and system descripti

Project will result in full compliance.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction 7/2/79 (1) Completion of Construction 12/1/80

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Total estimated cost for system, including all labor, materials, and electrical

at $20,800.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

None

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ___Yes _x_No

F. Normal equipment operating time: hrs/day 16 ; days/wk 5 ; wks/yr 52 ; if power plant, hrs/yr N/A ; if seasonal, describe:

Based upon facility design data, this sytem will be in operation a maximum

of 1,730 hours/year during the normal equipment operation time as shown above.

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant?	No
a. If yes, has "offset" been applied?	-
b. If yes, has "Lowest Achievable Emission Rate" been applied?	-
c. If yes, list non-attainment pollutants.	
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.	No (2)
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI & VII.	No (2)
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?	No
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source?	No

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable. (1) Facility construction began on July 2, 1979; air pollution control system construction is scheduled to begin on April 14, 198[

(2) See Section II-G Supplement.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants Type	% Wt	Utilization Rate - lbs/hr	Relate to Flow Diagram
Grain & Feed Ingredients	Dust	0.00768	195,800	Entry Point (1)

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 195,800

2. Product Weight (lbs/hr): 195,799.85

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission[1] Maximum lbs/hr	Actual T/yr	Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential[4] Emission lbs/hr	T/yr	Relate to Flow Diagram
Grain & Feed Dust	0.1503	0.1301	Process Weight	36.04	15.03	13.01	Points 1-7

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns)[5]	Basis for Efficiency (Sec.V,It
Flex Kleen Model 84 WRS-48 bag filter	Grain & Feed Dust	99%	5 microns & larger	Manufactur Experience

[1]See Section V, Item 2.
[2]Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E.(1), F.A.C. -- 0.1 pounds per million BTU heat input)
[3]Calculated from operating rate and applicable standard
[4]Emission, if source operated without control (See Section V, Item 3)
[5]If Applicable

E. Fuels NOT APPLICABLE

Type (Be Specific)	Consumption* avg/hr	max./hr	Maximum Heat Input (MMBTU/hr)

*Units Natural Gas,MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average NOT APPLICABLE Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

All collected solids are returned to process.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 114 ft. Stack Diameter: 1.25 ft.

Gas Flow Rate: 4385 ACFM Gas Exit Temperature: Ambient °F.

Water Vapor Content: 0 % Velocity: 58.5 FPS

THIS SHEET NOT APPLICABLE

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) ___

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (^oF)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ft. Stack Diameter _____ Stack Temp._____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velosity _____FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: ( ) Cyclone ( ) Wet Scrubber

( ) Afterburner ( ) Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight - show derivation.

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.,) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

( ) Yes (X) No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources? (If yes, attach copy)

( ) Yes (X) No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
Dust	~~99% removal efficiency~~

D. Describe the existing control and treatment technology (if any).

1. Control Device/System: NOT APPLICABLE
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: °F

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if neceaasry).

1.

a. Control Device: Cyclone collector

b. Operating Principles: Centrifugal forces

c. Efficiency*: 80 to 90% d. Capital Cost: Medium-high

e. Useful Life: 10 years f. Operating Cost: Medium

g. Energy*: Fan & Airlock h. Maintenance Cost: Medium

i. Availability of construction materials and process chemicals: Cyclone collectors are manufactured by several companies

j. Applicability to manufacturing processes: For small dust particles, efficiencies are not the best.

k. Ability to construct with control device, install in available space, and operate within proposed levels: Could be incorporated into design, but would take up much more space and not comply with proposed levels of control .

2.

a. Control Device: Gravity settling chamber

b. Operating Principles: Reduction in air stream velocity, allowing gravitational sedimentation.

c. Efficiency*: 50% (1) d. Capital Cost: Medium - high

e. Useful Life: 10 years f. Operating Cost: Low

g. Energy**: Fan & airlocks h. Maintenance Costs: Low

i. Availability of construction materials and process chemicals. Could be purchased from several sources.

j. Applicability to manufacturing processes:

Very limited in feed industry.

k. Ability to construct with control device, install in available space, and operate within proposed levels:

Would require unreasonably large units and not operate within proposed efficiency levels.

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power - KWH design rate.

(1) "Environmental Controls for Feed Manufacturing and Grain Handling" American Feed Manufacturers Association - T.E. Stivers Organization, 1971.

3.

a. Control Device: Louver collector

b. Operating Principles: Centrifugal forces are applied to particles by rapidly changing the direction of flow with a series of plates set at an angle. Coarser particles traverse the air stream and are kicked back into the dirty side by the rebound vector and aerodynamic spin of impact.

c. Efficiency*: 80% d. Capital Cost: Low

e. Life: 10 years f. Operating Cost: Low

g. Energy: Fan h. Maintenance Cost: Low

i. Availability of construction materials and process chemicals: Not certain as to the availability of louver manufacturers.

j. Applicability to manufacturing processes: Limited

k. Ability to construct with control device, install in available space and operate within proposed levels: Could more conveniently construct with this device, but probably not obtain desired levels of pollutant removal.

4.

a. Control Device High energy centrifugal.

b. Operating Principles: Centrifugal forces, secondary gas streams, and spiral action.

c. Efficiency*: 80 to 90% (1) d. Capital Cost: Medium-High

e. Life: 10 years f. Operating Cost: High

g. Energy: Greater energy requirements than most methods h. Maintenance Cost: High

i. Availability of construction materials and process chemicals: Not certain as to the availability.

j. Applicability to manufacturing processes: Could be incorporated.

k. Ability to construct with control device, install in available space, and operate within proposed levels: Could do all except obtain desired level of pollutant removal.

F. Describe the control technology selected:

1. Control Device: Fabric bag filter

2. Efficiency*: 99% (manufacturer) 3. Capital Cost: $20,800

4. Life: 10 years 5. Operating Cost: High

6. Energy: Fan and airlocks 7. Maintenance Cost: High

8. Manufacturer: Flexkleen bag filter

9. Other locations where employed on similar processes:

a.

(1) Company: Country Pride, Inc.

(2) Mailing Address: Box 799, Easton, Maryland

(3) City: Hurlock (4) State: Maryland

(5) Environmental Manager: Dan Johnson, P.E.

(6) Telephone No. (301) 943-4811 Ext. 293

*Explain method of determining efficiency above.

(1) "Environmental Controls for Feed Manufacturing & Grain Handling", American Feed Manufacturers Association - T.E. Stivers Organization, 1971.

(7) Emissions:*

CONTAMINANT	RATE OR CONCENTRATION
Dust	Has not been tested as of this date.

(8) Process Rate:* Similar

b.

(1) Company: Boone Valley Coop Proc. Association

(2) Mailing Address: Eagle Grove, Iowa 50533

(3) City: Eagle Grove (4) State: Iowa

(5) Environmental Manager: E.G. Loux

(6) Telephone No: (515) 448-4711

(7) Emissions:*

CONTAMINANT	RATE OR CONCENTRATION
Dust	Has not been tested as of this date.

(8) Process Rate:* Similar

10. Reason for selection and description of systems:

The fabric type bag filter system which has been selected is the most widely used and accepted means of reducing dust emission levels from feedmills for meeting current levels of air quality standards.

Major components of the receiving system include:

1. Pick-ups at elevator boots, bag spout, and bin vents.
2. A model 84 WRS-48 Flexkleen reverse jet cleaning tubular cloth filter
3. A model 10 x 8 MAC airlock.
4. A model 158 PLR New York Blower
5. All associated duct work.

See Section V, Supplement 6-a, and 6-b, for more information.

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

NOT APPLICABLE: See supplement for Section II-G.

A. Company Monitored Data

1. _____no sites _____TSP ____( )SO_2* _____Wind spd/dir

Period of monitoring ____/__/____ to ____/__/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent?

___Yes ___No

b) Was instrumentation calibrated in accordance with Department procedures?

___Yes ___No ___Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____Year(s) of data from ____/__/____ to ____/__/____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

_____

4. Stability wind rose (STAR) data obtained from (location) _____

_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____grams/sec
SO_2	_____grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.